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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

JANUARY, 1948

No. 1



He is going to make it, one step at a time, because you give him his chance through your purchase of Easter Seals.

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

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The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

The World Food Need

By

HAZEL K. STIEBELING

Talk to State Nutrition Committee
Raleigh, North Carolina

THIS is a year of food crisis throughout the world. We meet it here in the form of high food prices, prices more than twice as high as in 1935-39. Soon we shall find much less meat in the markets than we would like to buy. Nevertheless, we enjoy generous food supplies. Most other parts of the world are far less fortunate. Despite the extraordinary efforts of governments to alleviate food shortages, hunger continues for many people. In Europe, hunger is retarding general economic recovery and indeed the return to peaceful conditions. And, at best, we probably face two or three more years of short food supplies.

In this crop year, 1947-48, world per capita food consumption is expected to be 2 or 3 per cent below last year, and nearly 10 per cent below prewar, according to the October estimates of the International Emergency Food Council. In pondering the significance of a figure 10 per cent below prewar we should remember that even in that earlier period over half of the people on earth were getting fewer than 2250 calories per day. We also should keep in mind that the change from prewar levels has differed greatly from country to country. Last year, for example, it was 30 per cent below prewar in Germany;

here in the USA it was considerably above.

Except for potatoes, world production of most food crops was higher in 1947-48 than in the year before. But a shortage of feed crops in all of the heavy livestock producing areas has created a serious food situation. World production of coarse food and feed grains combined, is down by 10 per cent. As a result there is heavy pressure on the part of livestock producers everywhere to use grain for feed that should be used for food.

The major reason for shortage of feed compared with the previous year is the extremely unfavorable weather of last year. Here we had a short corn crop. In Europe the heavy freezes of last winter and the record-breaking drought of the summer resulted in short potato and feed crops.

Food reserves in surplus-producing areas are smaller than in 1946-47, and in some, notably here in the Western hemisphere, consumers have incomes and savings big enough to buy more food than ever before. Hence it has been more difficult than might have been expected to acquire the food needed for export to deficit countries. Besides, the world's population has grown by some 15 to 20 million. And so food

tends to be short. And because it isn't evenly distributed, some groups will inevitably suffer greatly before the next harvest comes in. The problem is to alleviate this inevitable situation to the greatest possible degree.

Shortages of food and fuel, fiscal and financial difficulties, and frustration and fear are closely interrelated in their devastating effect upon people and nations. In Europe, for example, shortages of food have impaired the productivity of workers in some key industries—notably in the production of coal in the Ruhr. Until very recently, shortages of coal have prevented the full use of plant capacity for the manufacture of nitrogen fertilizer. Lack of sufficient fertilizer has limited the production of indigenous food.

Lack of coal has also stood in the way of steel production and all-out industrial activity.

The inadequacy of production has made it practically impossible for most of the European countries to export large enough quantities of goods to pay for the imports which they urgently needed. This situation has in turn been aggravated by the fact that the things they needed most were in short supply throughout the world—with the result that the prices they have had to pay for what they bought abroad have gone up much faster than the prices of those things they had to sell.

In many countries inflation has contributed to the prevailing difficulties. Money was plentiful at the end of the war and few governments have been strong enough to take the necessary corrective measures. In the worst cases (as in Germany, for example) this has meant a widespread reversion to primitive methods of barter. More generally it has contributed to extensive black market dealings.

Thus, the war brought not only physical destruction, but a shattering disruption of economic organization and dislocation of economic relations, recovery from which will not be easy.

In the long-run, the situation can be remedied only by the development of

concrete programs for coordinated and orderly expansion of production. This obviously requires both national and international efforts properly integrated. Agricultural rehabilitation and expansion must go hand and hand with industrial expansion and financial stabilization. To this, attention must and will be given.

The short-run and immediate task before nutrition committees in this country is to help families here help themselves and others through wise use of our own food resources. There simply isn't food enough to eat as we would like and yet to meet even the minimal requirements for grain, fat, dried milk and other foods abroad. Of some things such as meat, there isn't enough even to satisfy our own people. And if we continue to try to buy as much as we have had recently, prices will be pushed up until only the rich can afford all they want.

Each household can make its contribution to the Nation's task of conservation, so as both to save food and to use it wisely, especially the scarce grain, fats, and meat. In choosing among these scarce articles, take an extra slice of bread rather than corresponding extra calories from meat, because 3 or 4 times as much grain goes into livestock production than into bread production of the same number of calories. Also join in the fight to stop feeding our precious food to rats and insects.

We can choose to lessen the demand for bread, for fat, and for meat, especially highly finished grain-fed meat. We can choose to select commercial or good grades of meat, instead of choice or prime, which require undue amounts of grain for their production. We can conserve and make full use of every ounce of drippings and bacon fat. We can eat a second potato or an additional serving of some other vegetable instead of the second slice of bread. During my two week stay in September with a family in Britain, no bread was on the table at the two main meals of each day. Plain boiled potatoes or tur-

nips or carrots (no butter) were served instead. At public eating places, bread was served only on request. If you ordered bread for dinner or supper it counted as a course, and you forfeited soup or dessert.

Some families in this country are living at bedrock levels, and shouldn't be asked to reduce their food consumption. But everyone can avoid waste, and some of us can get along better by eating less. Many of us can adjust, and include in our everyday fare more than the usual amounts of fresh fruits and vegetables, and more of other hard-to-transport foods, even if, in some cases, these are among the relatively expensive foods.

I need not spell out for this audience the many ways in which nutrition-trained people can help the Nation's families make good use of the food we have. College-trained nutritionists are resourceful persons. They can do much to help popularize effective sharing and conservation. These are important measures, both for our friends abroad and for our own pocketbooks, to help combat inflation.

Each of us must have a personal program as well as a part to play in putting a national program into effect. We must not buy more than we need—or eat more than we need—or throw any food away. When we buy foolishly, we are helping to keep prices high and fanning inflation. When we overeat, we are compelling overseas friends to undereat. When we waste food, or nutrients—bread, fat, even the invisible minerals and vitamins—we are wasting lives.

In passing, I also want to remind you of the importance of keeping alive a sense of direct participation in the sharing of food and clothing. The parcels that you send to your overseas friends, or give through a church, through CARE (the Cooperative for American Remittances to Europe), the American Women's Voluntary Services or other organizations—these parcels count for much more than their mere intrinsic value. Though what any one

person can give may seem only a drop in the great sea of need, singly and collectively such gifts mean much. To the families that get them they are invaluable. To everyone they are symbols of sympathy and understanding—morale builders of the first order.

I am sure that our answer to the world's need would come swiftly and generously could each of us but see for ourselves the contrast between our own way of living and that which exists in so many other places. Each of us who has been abroad is trying to explain—each from his own experience. Our friends in other countries are trying to describe their need. But it takes imagination—imagination of a very high type—really to comprehend these oral and written reports. Those of us who haven't seen first-hand may need to hear the story over and over—from many persons, in many contexts. And while first emphasis is generally laid on the need for material things, home economists will not forget the many ways in which the stresses and strains of long-continued poverty may adversely affect family and community life.

What too little food means day in, day out, for years, is hard for us to comprehend. Of course it means different things to different groups in the population: the city, the farm; the young, the old; the rich, the poor; the housewife, the heavy worker; in countries, as Britain, where food controls safeguard distribution according to need, in countries where over and above the meager rationed amounts of a few items every man is left pretty much to shift for himself. There is wide variation among countries in the degree of the current food crisis, the adjustments that can be made in food utilization, the opportunities for food conservation and food control.

In most of the countries suffering from severe food shortage and poor food distribution, the plight of the aged is pitiful. I shall never forget the anxious expression and the wax-like appearance of the faces of the elderly people whom I saw in Berlin in the

summer of 1946—people who in August were sitting in damp, dark, cold rooms bundled up with sweaters and rugs—people who couldn't avail themselves of the sun's warmth between showers because their knees and ankles were so swollen or stiff that they couldn't walk much, and who were too ill clothed even to sit on the curbstone in the chilly afternoon sunshine. Most of them had lost the savings on which their security was to rest, and they did not have the strength to trudge into the country or stand in long queues for food.

Food shortages intensify all problems of human relations. I remember one family of 13 children and an aged grandmother. To avoid the constant bickering among hungry children, the mother decided finally to give each child his quota of bread as soon as the weekly rations were received. To each she gave a special place to keep it so each could eat when and as he chose. Only thus could the children put aside the suspicion that someone else was getting more than his share. Half-starved people are very self-centered.

That calorie shortages were marked last year is indicated by the fact that average adult weights in the U. S. Zone of Germany were lower in all instances in July 1947 than in the same month of 1946. The average losses varied from 0.3 pounds among women in the age ranges 20-39 years, and 60 years and over, to 4.6 pounds among men 60 years and over. Particularly significant is the average loss of 1.3 pounds in men aged 20 to 39 and 1.9 pounds in men aged 40 to 59 years. These groups represent the main productive labor pool so essential to economic recovery in the U. S. Zone. The average weights of all age and sex groups of adults are well below the minimum weight considered necessary for satisfactory health. This "minimum" level is not what would be considered a normal weight or an average weight of a well nourished German population. For example, men aged 20 to 39 years averaged 130.6 pounds in weight as compared to the minimum of 142 pounds considered

satisfactory for health and the average of approximately 154 pounds for this age group in the United States.

On short food supplies—only half to two-thirds of what we are now eating in this country—there isn't the energy to do really heavy work. Naturally the first adjustment people make to caloric shortage is to spare themselves from physical exertion as much as possible. When energy expenditures greatly exceeds energy intake, weight loss begins. Strength begins to diminish. People's faces sadden; cheeks lose their curves; eyes sink deeper into their sockets. People become irritable and suspicious. They lose their good humor. They become intensely preoccupied with food—robbed of all thought except where the next meal is coming from. Absenteeism from work increases—men must take time, a day or two a week, to scour the countryside for off-the-ration extras to eke out their family's existence. Shortage of food is reducing essential industrial production. While in most of Europe the coal miners, for example, get extra rations, their families do not. So the miner shares his ration with his wife and children and then lacks the physical strength to maintain his output in the pits. To combat this, special incentives including food for other family members are now being given to miners in U. K. and U. S. zones of Germany to encourage them to increase coal output; coal, as has been said before, is one of the chief keys to economic recovery in Europe.

The prewar food of Europe as a whole is said to have provided about 2850 calories per person per day. This is scarcely equal to British consumption of last year—an amount believed to be about the minimum for maintenance of good health of people, even when a very high degree of control can be exercised in the composition and distribution of the diet. The British diet of last year was Spartan-like and monotonous, even more so than during the war. Nevertheless, it still provided on a national scale considerably more milk, fruit, mature legumes, and veg-

etables other than potatoes than the marginal quantities to which many European countries are now reduced, amounts that are associated with marked increase in tuberculosis and in infant mortality rates. Moreover, the British selectively direct their food—milk and vitamin-rich foods, in particular—to their vulnerable groups whose needs are most urgent. As a result the nutritional health of the British people has been maintained in a remarkable fashion. The food discipline to which that nation has subjected itself, and the application of the science of nutrition to its program of food production, import and distribution has been one of the valuable contributions to our knowledge of good food management in time of emergency.

In the year ahead, food in Britain will continue to be at a low level. But in nutritional well-being, most countries of Europe probably will fall below Britain. In France last year about 2700 calories were available for the nation as a whole—2300 in large urban centers, 2500 in the smaller cities and 3000 on farms. But this year diets will be considerably poorer unless imports can be greatly increased. In November bread rations were less than half of prewar levels and there was milk only for children under three years. While there are no frank deficiency diseases, children over 10 are undersized as compared with prewar, and city workers are underweight (10 to 12 per cent.) They tire easily, and lack the joy of living characteristic of the nation.

Shortage of supplies in cities has forced up prices, and through price has curtailed consumption. Rationed food costs only about $\frac{1}{2}$ as much per calorie than free market or black market goods. But in November, 1947,

bread was 7.6 times August 1939 prices
eggs, 22.3;
meats, 11 to 16;
milk, 13;
mature dry legumes, 20 to 27;
lard, 8;
sugar, 13;

potatoes, 11.8.

A food budget prewar in quantity would take practically the entire wages of unskilled workers, and 75 to 80 per cent of those of the skilled. This means poorer food for workers, and to manage they must seek supplementary jobs, and depend heavily on food parcels from peasant friends. The aged without rural connections suffer greatly. In rural areas, people are eating better than before the war. Transportation problems, lack of confidence in the franc, and lack of consumer goods for which to exchange farm produce means that the peasants now eat more, and sell less than formerly. In rural areas, especially in Brittany and Normandy, the better diets have resulted in declining tuberculosis rates during the war and since.

And so, with misery, cold and hunger stalking much of the earth today, there is general agreement that we must help and help now—to reduce suffering, to aid in economic and physical recovery, and to bring about peace. Steps have been taken to bring material aid to Greece and Turkey, and through the International Childrens Emergency Fund to children, adolescents, expectant and nursing mothers in countries that were victims of aggression. Some interim aid has also been given Italy, France and Austria. A program of rehabilitation and economic recovery of 16 nations of Western Europe is now under consideration. It is recognized that the need is there and that it is large-scale. Questions as to just how much, and as to how it shall be handled are still to be determined by the Congress.

This increased need in most parts of the world for food and other essentials of living, smaller supplies, higher prices, and a consideration of human values, must all enter into decisions relating to governmental action and household and personal adjustments—in this and other food-surplus countries. Efforts are being devoted to increase the export from USA not only of grains, but of other foods as well,

even though some of the latter are fairly expensive. Joint international efforts are being made to assure maximum food shipments from all exporting countries, the channeling of exports to the most critical areas, and the increase in production of food in other countries.

Farmers, industry and the citizens of this country are all being asked to conserve food, to use it selectively, and to prevent waste in every way possible. We are being asked voluntarily to reduce our demand for grain for food, drink, and feed, to accept less "well-finished" meat, to continue the salvaging of fat, and to increase where possible the consumption of hard-to-

transport fresh vegetables, fruits, and other abundant foods. We are being asked to prevent waste and spoilage in every possible way.

Both the immediate and the long-term problems of food supply are so tremendous and of such significance that they must be dealt with from many angles on a national and international scale. But in a democratic country, a national program can succeed fully only when each individual, each household, each industry and business understands the issues and cooperates generously. We have a great and important task before us. We must not, and with your help, we will not fail.

The North Carolina League For Crippled Children, Inc.

Dates and Program

For the 13th year, the North Carolina League for Crippled Children invites its friends to share in financing its work during the Annual Easter Seal Campaign, February 28th through Easter, March 28th. During the past year the generous contributions of the public made it possible to expand considerably the program of the League.

Among the services rendered by the League during the past year were:

1. **Medical Care:** Specialized care to insure best possible physical correction included orthopaedic operations, orthodonture treatments, blood transfusions, clinical treatments, hospitalization, convalescent home care, and physicians' visits to homes.

2. **Artificial Aids:** Artificial limbs, extension shoes, crutches, wheel chairs, glasses, hearing aids, and a plastic ear, were provided.

3. **Transportation:** To clinics, hospitals, and schools.

4. **Education:** a) Special training classes at the University of North Carolina for teachers interested in

- working with handicapped pupils.
- b) Summer Educational Center for handicapped children.
- c) A speech correction program in one city school.
- d) An orthopedic class in two city schools.
- e) Bedside teaching in hospitals and private homes.
- f) Boarding school for pupils who cannot get to and from public school.
- g) Speech therapy and remedial reading for children in two counties.
- h) Educational publicity through conferences and bulletins to inform the public of the needs of crippled children.

5. **Research:** The League staff made a nationwide study of laws pertaining to the education of handicapped children. Following this study, a bill was drafted and introduced to the 1947 General Assembly. The General Assembly approved the bill, so now the type of education needed by the handicapped children in North Carolina through

the public schools will be made available to them, as soon as teachers can be trained in specialized methods needed for conducting such classes.

6. Other Services: Referral to proper agencies of requests for services not available from the League. Interpretation to parents of children's condition and needs when the physician was unable to talk with parents. Supplemental services of other agencies for needs not included in scope of their program.

The present services of the League need to be expanded and many others need to be added. Both will be done as soon as funds are available.

The League is a private social agency that cooperates with, but does not duplicate the work of, other public and private charitable organizations. Aid the crippled whether the condition resulted from accident, disease, infection or birth. Its only requirement for aid—a valid need not otherwise provided for. Its main source of funds—voluntary contributions during the Annual Easter Seal Campaigns.

The consistent growth of the League during the past years reflects both the fundamental need for such an agency, and the increase of public confidence in its program. Your contribution at this time will improve the lot of one or more crippled children. For whatever your heart prompts you to give, the children say "thank you and Happy Easter."

STATISTICS RE: HANDICAPPED PERSONS IN THE UNITED STATES

"The Census Bureau reported that the U. S. had gained approximately 2,279,000 residents in 1946, the greatest one-year population spurt in its history. Estimated total U. S. population: 142,673,000." (From TIME, October 20, 1947.)

How Many Persons Are Physically Handicapped

28,000,000 handicapped persons in the U. S., including all ages and all types of handicaps. (Lewis Schwellenbach, Secretary of Labor, in letter to all

governors in the U. S. dated February 26, 1947.)

How Many Persons Need Rehabilitation Services

2,500,000 persons of working age have injuries which interfere with getting and holding suitable jobs. (Journal of American Medical Association, September 23, 1946.)

Approximately 97% of all handicapped persons can be rehabilitated to point of some gainful employment. (Dr. Frank Kruzen: Occupational Therapy and Rehabilitation, Vol. 25, No. 4, August 1946.)

Economic Value of Rehabilitation Services

1946—the total yearly income of rehabilitated group that received service by state rehabilitation agency increased about from \$11,000,000 before rehabilitation to \$56,000,000 after rehabilitation. **MORE THAN 400% INCREASE!**

\$300-\$600—is average cost for maintaining a disabled person in idleness each year.

\$400—is the average cost of rehabilitating him into a productive citizen. (Office of Vocational Rehabilitation, Federal Security Agency. "July 6—Independence Day for Disabled Civilians"—1947.)

How Many Children Need Special Education

5,000,000 children (approximately) in the U. S. between the ages of 5 and 19 years are classified as exceptional children. Mentally gifted, as well as physically and mentally disabled children are defined as exceptional children. In North Carolina last year approximately 900,000 children were enrolled in the public schools. According to percentages given in the following column there are in North Carolina:

18,000 children (0.2%) who are blind and partially seeing

13,500 children (1.5%) who are deaf and hard of hearing

9,000 children (1%) who are crippled

13,500 children (1.5%) who have speech defects

18,000 children (2%) who are mentally retarded
18,000 children (2%) who are mentally gifted
1,800 children (0.2%) who are epileptic
23,500 children (2.5%) who are behavior problems

(Needs of Exceptional Children: Leaflet No. 74, p. 4, by Elise Martens, U. S. Office of Education, Federal Security Agency.)

How Many Children Have Cerebral Palsy

7 out of every 100,000 population are born with cerebral palsy. Of the 7, at least 4 are educable. (Dr. Winthrop M. Phelps: "The Doctors Talk It Over"—page 4, August 5, 1947.)

SUGGESTED MATERIAL FOR USE IN EDITORIALS

Article X of the Crippled Children's Bill of Rights says:

"Not only for its own sake, but for the benefit of society as a whole, every crippled child has the right to the best body which modern science can help it to secure; the best mind which modern education can provide; the best training which modern vocational guidance can give; the best position in life which its physical condition, perfected as it best may be, will permit; and the best opportunity for spiritual development which its environment affords."

This is the eventual aim of the League for Crippled Children. As yet, funds and workers have not been adequate to supply all the services which would be required to provide this ideal program, but it is hoped that all can be made possible in the near future.

The dawn of this Easter Season lights a world in search of a formula for world peace. Men of goodwill everywhere are planning for reconstruction and rehabilitation. You, the friends of crippled children, have a significant share in this planning. Thousands of youngsters, handicapped with little crippled bodies, lack of vision or hearing, are asking you for the opportunity of taking their rightful place in the

life of America. These children are not asking for charity—all they want is an even chance with their non-handicapped brothers and sisters.

Each Easter Season you are invited to take part in furnishing the opportunities needed for providing that even chance — medical treatment, educational advantages, artificial appliances, crutches, wheelchairs, transportation to clinics, vocational guidance, psychological service, and recreation.

In considering your contribution, imagine: the bright face of a crippled boy having his first experience at walking; hospital and home classes for children eager to learn, but denied the privilege of going to school; special teachers and counselors helping children accept their disabilities and training them to make the best use of their assets.

The success or failure in life for a disabled child depends greatly upon the early assistance and understanding he is given to help him overcome his handicap. This is one of our great opportunities—and responsibilities! America's children will bear the responsibility of our Nation's tomorrow. Crippled children will have to share this responsibility, and should certainly be prepared to do their part. Please join again the partnership which provides opportunity for those crippled by inheritance, birth, disease, infection, or injury.

IT IS EXPENSIVE TO BE HANDICAPPED

Only 63,000 handicapped children in North Carolina! A small group when you consider that there are approximately 1,000,000 school children in our state! That is, unless one of these handicapped children happens to be yours—then it means nothing that 6 children out of every 100 are physically disabled in some way. Your child is your world and the fact that he is one of the 6% instead of the 94% makes the 6% loom far larger than the 94% ever could. Why? Because you cannot help but wonder why your otherwise beautiful baby should have had to be afflicted in some way—whether by

accident, birth, disease, infection, or inheritance, matters little—the important thing is that he cannot walk, or talk, or hear, or see, or (and sadder still) is incapable of thinking intelligently. Then, besides the fact that he is denied the use or partial use of one of his faculties, it is very expensive to have that extra care he needs provided for him.

Medical care, especially for the crippled child, often runs into years—one operation must be performed and then there is a waiting period while the incision heals and the child becomes accustomed to the change in his arm, or leg, or body, and then there is another operation and another wait, again followed by others. This costs heavily for the physician who does the operating must be highly specialized or the results may not be those desired. Follow-up care during the time between operations is expensive, too, for it is necessary to have someone who understands the nature of the surgeon's work to help in supervising the child's care between operations if best results are obtained. Sometimes well meaning relatives with more sentiment than understanding, do things which retard the treatments. They "feel sorry" for the little child who with every step he takes must carry a brace which weighs pounds on his too thin leg, so they take it off, or loosen a bandage, and so cause his limb to heal in a different way from what the physician intended. This may make it necessary for an additional operation to be performed, so the child must suffer one more than would have been needed if the results the surgeon expected had been secured with each operation.

Education, too, for the exceptional child is more costly. If he cannot come to school and take the classes offered there as they are, then school must be brought to him. Perhaps he can get to school but arrangements must be made in the classroom to provide special equipment, or teachers must be employed who have a particu-

lar type of training in special techniques which make it possible for her to communicate with the child who does not hear or talk or who does not see to learn to understand the world which is around him. Then there is the fact that the everyday things which everyone must have are higher for the child who is partially disabled. Think of the necessity of purchasing two pair of shoes each time a change of shoes is needed. The child whose crippled foot is smaller than his normal one must have two entirely different sizes or be very uncomfortable. The child whose paralysis affects the hips and lower extremities often develops shoulders far out of proportion, and a suit of one size would not fit both the upper and lower portions of his body, and many other things could be mentioned which cost more for the crippled child because they must be different and cannot be bought from the stock on the counter.

For other handicapped children, the aids toward helping offset their limitations also are costly. The hearing aid, glasses, artificial appliances, braces, and even irregular teeth call for the work of a specialist and a long series of treatments—all of which cost more than can be afforded by an average man on an average salary with an average family to support. Oftentimes, the handicapped child is provided with his needs at the expense of food for the other children. If this continues over a long period of time a total family becomes undernourished and subject to any disease which may be prevalent.

IT IS TERRIBLY EXPENSIVE to be handicapped and to offset some of that abnormal cost such organizations as the North Carolina League for Crippled Children have been established and have functioned for several years. This has been possible because the "Good People" of North Carolina have graciously and generously supported its program of services to handicapped children.

SPECIAL EDUCATION

This has long been of special interest to the North Carolina League for Crippled Children, Inc. For that reason the League is cooperating with the State Department of Public Instruction, and others, in introducing to the Legislature a plan for providing these Exceptional Children with the techniques and facilities needed for making education available to them.

Some children are less fortunate than others, both physically and mentally, and need special consideration in order that they may secure the kind of an education which will be usable to them.

It seems right that North Carolina should consider the specific needs of all the children in the state and provide the facilities for meeting those needs. For the exceptional child to have equal opportunities with the non-handicapped child, extra provisions both in training techniques and classroom facilities must be made available. The 63,000 (or more) handicapped children in the state deserve an education, too—in fact it will be far more expensive to fail to educate them than the extra cost of the extra provisions needed now to give them the correct educational opportunities.

Notes And Comment

By

THE ACTING EDITOR

JOSEPHUS DANIELS—Public Health lost a powerful friend when death ended the long and useful career of Josephus Daniels. Public health workers, particularly the old timers, appreciate the service which he had rendered. Many eulogies have been written but none can better express the feeling which public health workers have for the memory of Josephus Daniels than Mr. William H. Richardson's, who for the past ten years has been a public health worker.

Nearly forty years ago Mr. Richardson worked as a cub-reporter for the *News and Observer* under the direct supervision and tutorage of Mr. Daniels. Since that time he has been regarded as one of Mr. Daniel's boys. Each Saturday morning Mr. Richardson gives a radio broadcast over Station WPTF of Raleigh. His broadcasts deal with public health problems and personalities. His broadcast of January 17, 1948 is as follows:

Today's broadcast is not about Public Health, *per se*, but about a man who gave Public Health his whole-hearted support because it fitted into the pattern of his philosophy of life—Josephus

Daniels, whose mortal remains will be laid to rest this afternoon in Oakwood Cemetery, in Raleigh, beside his beloved wife, who walked at his side for more than a half century. Though friends will mourn today at his graveside, the spirit of this great and good man has taken its place in the firmament of everlasting fame, there to shine for generations to come and to inspire men and women to nobler living.

His exemplary habits did not constitute the cause of Josephus Daniels' greatness; they were the results of something basic that seemed to dominate his life from the beginning. He was as manly as a Hercules—as gentle as a woman. His thorough mastery of the English language made it unnecessary for him to resort to profanity; his respect for the human body, as a temple dedicated to the spirit, excluded those things which harm the body. His life and personality constituted a living example of perfect health—that is, physical, mental and moral health. To him, the three were inseparable.

He understood and was sympathetic

with the problems of the poor, the weak, and the underprivileged, whose cause he forever championed. As Dr. Carl V. Reynolds, State Health Officer, so aptly stated in his tribute, published in the News and Observer yesterday morning: "He talked with kings, but the language best understood by him was that of the common man."

Though 85 years old when stricken down by his last illness—the only really serious illness in his long life—he was young in spirit, and lived in the future, rather than in the past. He indulged in retrospection only to the extent that he viewed the past as a fitting foundation for the future—something to be improved upon. He was not a **destructionist**; his respect for the traditions of his people was profound, yet when tradition conflicts with progress, he championed the latter. When he put down his little stub of a pencil, with which he wrote all his editorials, and went to bed for the last time, he went not to dream of the past but to plan for the future—to plan, for example, the writing of the book he intended to give the world on his one hundredth birthday.

Only recently, this great American made some observations, which were given on one of these broadcasts, but which will bear repeating.

"What do you think a man 65 years old ought to do?" he was asked, around Thanksgiving Day, last year, as the 85-year old editor and publisher sat at his desk in his News and Observer office, writing editorials with his stub of a pencil. "Why, he ought to keep on working, if he is able," he replied. "In fact, a man ought to work just as long as he is physically fit and mentally alert. (He was both). There may be exceptions," he went on, but I think that ought to be the rule. When a man gets 65, we'll say, he can do one of several things. If he is physically and mentally fit, he can keep on at what he is doing, until such a time as he feels he can no longer do justice to the job he is working at; or, if he has made adequate provision for it, he can

go into voluntary retirement. If he belongs to no retirement system, he can look around for generous or well-to-do relatives who will take him in as a permanent charge. If there are no such benefactors handy, he can go on charity and let the taxpayers sustain him. But no person who is capable of self-support, whether he be 30 or 80, should be **required** to live at the expense of others. Just so long as the body is strong and the mind is active, **every human being** who wants to should be allowed to continue to make his contribution to a well-ordered economy, commensurate with his ability."

And then, with a twinkle in his eye, he smiled and said: "Why don't you write a piece or make a health broadcast about the value of old people?" The suggested broadcast was made, over this station. A copy of the script was mailed to Mr. Daniels, and the following Sunday it was printed, in part, in the News and Observer.

Public Health had no stronger supporter in North Carolina than Josephus Daniels. He advocated larger legislative appropriations for this important work, always maintaining that it was poor economy to undertake to save dollars and cents at the expense of human welfare. To repeat—that was a part of his philosophy of life: The protection of the weak, the sick, and underprivileged—and of little children.

And again referring to the **philosophy of life** that marked the activities of this great humanitarian, in whose memory flags are flying at half staff—none ever criticized that. There were those who differed with Josephus Daniels about his philosophy of government, but none who questioned his sincere concern for the common man. Seeing the multitudes, he, like the Master of Galilee, "had compassion upon them and was moved by their infirmities."

It was the privilege of your speaker, if you will pardon just this one personal reference, to join the staff of the News and Observer forty years ago

next September, as a cub reporter. Mr. Daniels was then and until the time of his death—affectionately known as “the old man.” It was an expression of the respect, confidence and affection which association with him engendered in the hearts of those who knew him at close range. To him, the youngest cub reporter was as much of an entity as the city editor, or the managing editor: and from the humblest member of his staff his mind always was open to suggestions.

There may be some listening in this morning who remember the buggy with the fringe around the top, in which Mr. Daniels used to ride each Sunday morning to the Edenton Street Methodist Sunday School, where he taught a class of “A&M”, boys. He referred to his class as the “Amen” class. “Miss Addie,” his wife, was a Presbyterian—he went to his church and she went to hers, each as devoted a Christian as ever blessed North Carolina. No matter what might have been his views about economics and politics — and purely civic affairs—Josephus Daniels always defended religion, as a basic necessity in the life of any people. He would not—could not—tolerate any reflection or disparaging remark about the Bible or its teachings. **The Book** remained deposited in the ark of his heart, and any attempt to profane it drew from Mr. Daniels a sharp rebuke. Nor would he tolerate any obscene joke. He was clean of speech, and none dared to use unseemly language in his presence.

One of the greatest fights Mr. Daniels ever made was not for enforced temperance, the reduction of railroad rates, or the continuance in power of the political party to which he belonged—although he battled relentlessly for all these. One of the greatest contributions he ever made to North Carolina was his militant defense of the hospital and medical care program, which was formulated several years previously and enacted into law by the 1947 General Assembly. He visualized people in rural sections suffering from the lack of adequate medical

care and hospitalization, and, consistent with his philosophy of life, threw all the weight of his personal and editorial force behind the movement to correct this condition.

He made a continuing war on vice—a fight that dated back to World War I, when he was asked by President Wilson to help devise ways and means designed not only to combat venereal diseases but to promote the general health of the armed forces. His newspaper was bold in its attacks on prostitution as the chief source of infection in the spread of venereal diseases and as basically immoral, and when such attacks drew the fire of critics, he failed to yield.

No attempt has been made during this brief broadcast to eulogize Josephus Daniels; no attempt to enumerate his services to his people. He now belongs to history, and it remains for historians to appraise his work. There may be, and doubtless, there will be memorials erected in his memory—public buildings may be dedicated to him, and even statues of him may be erected in public places. Such would be fitting tributes. But the greatest of all testimonials will remain that inscribed in the hearts of the people he loved and served.

If he could have left a verbal message for those he was about to leave, it might well have been, in the words of William Cullen Bryant:

So live, that when THY summons
comes to join
The innumerable caravan which
moves
To that mysterious realm where
each shall take
His chamber in the silent halls of
death,
Thou go not, like the quarry slave
at night,
Scourged to his dungeon, but sus-
tained and soothed
By an unfaltering trust, approach
thy grave
Like one who wraps the draperies
of his couch

About him and lies down to pleasant dreams.

In this manner, Josephus Daniels went to sleep.

**Amendment to Regulation No. 32
(Malaria Control)**

of the Regulations of the North Carolina State Board of Health Governing the Control of Communicable Diseases

Regulation No. 32 of the Regulations of the North Carolina State Board of Health Governing the Control of Communicable Diseases is hereby amended by adding at the end thereof the following:

9. It shall be the duty of all local health officers to enforce the provi-

sions of this regulation. Authorized representatives of the North Carolina State Board of Health and local health departments shall have authority at all times to enter, for the purpose of inspection, the premises upon which water has been impounded or upon which it is proposed to impound water. Any person who shall hinder or prevent any authorized representative of the North Carolina State Board of Health or a local health department in the performance of his duty in connection with this regulation shall be guilty of a violation thereof.

Adopted this 13th day of November, 1947.

Carl V. Reynolds, M.D.
Secretary and State Health Officer

Causes of Death In 1947 Are Compared With Those In 1900

A contrast between the causes of death in the United States in 1900 with those in 1947 indicates the high status of medical care and public health practice in the United States, according to an editorial which appears in the current issue of *Hygeia*, health magazine of the American Medical Association.

The *Hygeia* editor writes:

More impressive than any other demonstration of the great progress made by medical science is a contrast between the causes of death in the United States in 1900 with those in 1947.

In 1900 tuberculosis was still captain of the men of death, and more than 200 people out of each 100,000 population died from tuberculosis every year. Today tuberculosis is seventh in the list of the causes of death, and the rate has dropped to 37.2. Now heart disease is first. No doubt the increased control developed by the use of streptomycin and other methods of treatment will lower the rate for tuberculosis still further during the next 10 years.

In 1900 pneumonia was second, with a rate of 180.5. In 1947 pneumonia combined with influenza was sixth, and the rate is now 46.1. The control of pneumonia has been brought about by new developments in its treatment, utilizing penicillin and the sulfonamide drugs, and also by the application of oxygen and new drugs for controlling the heart. Moreover, we have learned much about the prevention of pneumonia, treating it as an infectious disease.

In 1900 diarrhea and inflammation of the intestines were third. The rate was 133.2. It is now far down on the list—possibly 15th—and the rate has changed to 14. Such conditions are controlled by widespread application of the laws of sanitation and hygiene, the provision of pure food, pure water and particularly pure milk. The almost universal pasteurization of milk in the United States has been a major factor in the control of diarrheal diseases.

In 1900 heart disease was fourth in the list of causes of death with a rate

of 132.1 for each 100,000 population. Now heart disease has a rate of 306.6. This means that more people are living longer and that the heart eventually succumbs to the advance of age and the degeneration of tissues associated with increased years.

Nephritis or inflammation of the kidneys was sixth in 1900 with a rate of 89. Now, as men live longer, nephritis has moved up to fifth place, but the rate is 58—far lower than it was in 1900. Great improvements have occurred in the care of inflammations of the kidneys. Moreover, we have learned much about the prevention of such inflammations. Especially important has been the application of infections of the kidney of new drugs, such as the sulfonamides, penicillin, streptomycin and mandelic acid.

The seventh classification in 1900 was unknown and ill defined diseases. The rate was 73.8. The classification has dropped out of the first 10 entirely and now is credited with a rate of 15.

Eighth in the list in 1900 was hemorrhage of the brain. Here again is an example of the effects of increasing age and the degenerations of the tissues that come with such prolongation of life. Today cerebral hemorrhage is third on the list of causes of death, and the rate is 90.5. With brain hemorrhage we associate hardening of the arteries and the breakdown of tissue.

Ninth in 1900 was accidents, with a rate of 65.4. In 1947 accidents moved up to fourth place with a rate of 71.2, and motor vehicle accidents accounted for 24.1 of this enormous figure. The motor car was just beginning to come on the scene in 1900; today we have a motor vehicle civilization. Society needs to develop new and better controls over this hazard than those that now prevail.

Tenth in 1900 was cancer, with a rate of 65 deaths for every 100,000 population. Today cancer is second in the

list of causes of death. The rate has moved up to 130, and cancer accounts for 180,000 deaths every year. Physicians are convinced that possibly one half and at least one third of these deaths could be prevented if people were aware of the fact that cancer diagnosed early is controllable by the use of surgery, X-ray or radium.

While the figures cited are cause for great congratulation and indicate the high status of medical care and public health practice in the United States, they should not be taken as an authority to relax our battle against the diseases that threaten the life of man. Research and the application of research in medical practice will yield answers to problems that today seem incapable of solution. The enactment of the act for establishing a National Science Foundation, which will encourage medical research along with research in the basic sciences, will give new weapons and new powers to the hundreds of thousands of scientists who are our soldiers in the battle against disease.



Albert Donaldson Liles, Jr., born June 2, 1947. Four months old, weighs 18 pounds. Son of Mr. and Mrs. A. D. Liles at 557 Newbern Avenue, Raleigh, N. C. Mrs. Liles was formerly Lillie Ruth Love, who was a member of the State Board of Health staff.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD of HEALTH

[This Bulletin will be sent free to any citizen of the State upon request.]

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

FEBRUARY, 1948

No. 2



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters.)	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

Public Health Nursing Week

THE fourth annual National Public Health Nursing Week, sponsored by the National Organization for Public Health Nursing, will be celebrated the week of April 11 through the 17th. This week will give communities all over the country the opportunity to present to the people of the United States a concerted story of public health nursing—its past accomplishments, present needs and future goals.

The following excerpts from Special Messages from Special People sent out by the National Organization for Public Health Nursing help to dramatize the theme "Help Your Public Health Nurse Help Your Community."

From Ruth W. Hubbard, R.N., President, National Organization for Public Health Nursing:

"Our first objective in 1948 is to continue our efforts to make the work of the public health nurse known to every person in these United States so that no individual will be in need of the service of the public health nurse and be at the same time unaware of her existence. Our second objective is to recruit to this branch of nursing an increasing number of young women who will find challenge and satisfaction in the opportunities for service which it offers."

From Thomas Parran, Surgeon General, U. S. Public Health Service and member NOPHN Sponsoring Committee for the "Week":

"The Public Health Nurse typifies the traditional ideal of nursing.

"Caring for the sick and furthering health in the home, her position has always been one of vital importance. Now, however, with shortages of hospital beds and the modern medical practice of sending patients home early from the hospital, the need for an increased supply of Public Health Nurses is greater than ever.

"These nurses visit young mothers who return home with babies only a few days old. They give essential care to patients with long-term illnesses, enabling them to go home earlier and thus releasing hospital beds for acutely ill patients. At home, with public health nursing care, these patients often show great improvement.

"In addition to these expanded duties, Public Health Nurses carry out an increasing number of community-wide services to protect and improve the health of all. They explain the need for immunization, X-ray examination, proper nutrition, child care, adequate sanitation, and other health measures. They assist the private physician by helping his patients carry out his instructions for regaining health.

"Public Health Nurses make more than 16 million visits to homes in a year, giving approximately 42 million hours of nursing service, much of which is devoted to bedside nursing. Their work is basic—involving the very fundamentals of nursing. The service of the Public Health Nurse in the home spells the difference between comfort

and suffering and sometimes even between life and death.

"A special week has been set aside to pay tribute to the Public Health Nurse. This year let us honor her by making National Public Health Nursing Week the symbol of our renewed efforts to swell the ranks of these nurses. Only 21,500 strong, they are in desperate need of additional recruits. Their responsibilities grow daily, and their forces must be strengthened accordingly. Let us, therefore, make full use of National Public Health Nursing Week by pushing toward the ultimate goal of public health nursing services for all."

From Mrs. Harry S. Truman, member of NOPHN Sponsoring Committee for the "Week":

"My hope is that Public Health Nursing will continue to spread throughout the country and that eventually all communities may receive the benefit of this splendid service."

From Kendall Emerson, M.D., Managing Director, National Tuberculosis Association:

"The public health nurse has an especially important role in the tuberculosis control program. Her assistance in case finding, in follow-up and in rehabilitation of patients cannot be too strongly stressed."

From C. E. A. Winslow, Dr. P.H., Editor American Journal of Public Health, and member NOPHN Sponsoring Committee for the "Week":

"Since the first public health nurse was employed in New York City seventy-one years ago, the average life span of a citizen of the United States has been increased by a quarter of a century. This triumph has been made possible by the advances made in the

laboratory in discovering the underlying causes of disease. Our Health Departments, our hospitals and the trained personnel of the medical, nursing, dental, engineering and allied professions could not, however, have accomplished such results without a final link in the chain—the public health nurse. She renders the direct professional services in the home; but she is also the messenger of health, the point of contact with the individual family, the ultimate channel through which the knowledge and the resources of the health sciences are actually brought to the men and women and children whom they are to serve. At one end of the chain are the Pasteurs, and the Listers, the Theobald Smiths and the Walter Reeds. At the other end are the 21,500 public health nurses who toil through the grimy tenement streets, or ride over the Appalachian Mountain passes, or bring succor to the residents of the rockbound islands off the Maine coast. The public health nurse is the spearhead of our attack on preventable disease, the preacher in the home of the gospel of health."

From Mrs. Franklin D. Roosevelt, member NOPHN Sponsoring Committee for the "Week":

"Public health nursing service is probably the greatest bulwark in the preservation of good health in our communities."

From Walter S. Gifford, Chairman of the Board, Community Service Society, N. Y., and member NOPHN Sponsoring Committee for the "Week":

"Because health is so fundamental to the well-being of individuals and families, to national security and world order, public health nursing through all that it does in bringing health to the people, is indeed a vital service of our times."

RESOURCES CONTRIBUTING TO TOTAL FAMILY LIVING*

BY MRS. EDITH BROCKER, SUPERVISING NURSE
Orange-Person-Chatham District Health Department
Chapel Hill, North Carolina

I SHOULD like for you to think with me about the health of the families in our communities. The constitution of the World Health Organization which was signed by fifty-one members at the International Health Conference in New York in 1946, defines "health as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This definition is so broad and so all-inclusive that it helps us to set for our goal—optimum health for each world citizen.

If we accept this challenging definition then we can explore and use the resources with which we have to work and will support all the projects for research, for we need more scientific information and better methods of procedure. Some one has said, "Certainty is illusive and repose is not the destiny of man."

Optimum health for everyone means that every human being of whatever race, religious or political belief, economic and social status has the fundamental right to the enjoyment of the highest attainable standard of health.

Since most of us are public health workers, we will probably think first of the protective functions of the local health departments and in 1947 sixty-six per cent of our population is under the supervision of an organized health department. Forty million are without. We can be proud that health departments had their origin in communities and that they were organized to fill a real need, even if the needs were to abate epidemics and to give medical

care, of a sort, to those who through age, poverty or misdemeanor had become the wards of the community. We here are in the army of the **Preventioners**. Dr. Parran says that "Prevention and treatment are two sides of the same coin." It takes both.

I do not need to remind this audience of the six functions of the local health departments nor do I need to review for you the duties of the personnel. We know so well that public health workers are not dispensers of health but teachers of healthful living. Many health departments are becoming outstanding adult education centers where classes are held for expectant parents, baby sitters, food handlers, those interested in studying infant care and child guidance, nutrition and other subjects.

We are aware of the tourniquet of safety that the sanitation department throws around our homes, schools and communities. Their progress includes practical preventive measures against diseases that are milk-borne, carried by polluted water, insects and unsafe disposal of wastes and sewage; so that we can have safe water, a safe milk supply, meats, foods, graded cafes, restaurants, and markets.

Along with the environmental sanitation program the Health Department staff has gone out strongly for immunization procedures. No longer do epidemics of smallpox, diphtheria and typhoid fever wipe out whole families in our community. The pest houses are gone. In many areas, tuberculosis and venereal disease have been and still are, great problems. These two diseases upset the equilibrium of the family probably more than any others and it has been the work of the health department staff to help these people to

*This article was presented at the State Public Health Meeting in Charlotte, November 3, 1947.

adjust to these disturbances in the family unit.

Help with health programs in the schools is an important part of health department work. It is said that ninety-five per cent of the babies born in the United States are in good physical condition at birth but by the age of four years, each of them average three physical defects not counting carious teeth. The program of physical defect detection and correction is extremely important to a child's progress and happiness in his school life. All of us will agree that health development of a child is of basic importance to his ability to live harmoniously in a changing total environment.

To many it may seem that our public health services (to the family) in the field of prevention are not very dramatic or too helpful. But the essence of prevention is to see that "nothing untoward happens" to any one in the community. It may not be "news" that the Hodunk family escaped typhoid fever, but each of us is glad that life expectancy has been increased to about sixty-five years (sixty-nine for women) and that tuberculosis has gone down from near the top to seventh place on the list of the ten leading causes for death.

The resources of the local health department touch a child before he is born if his parents attended the Planned Parenthood clinic or if his mother needed clinic or public health nursing service or if his progenitors attended classes for expectant parents. His birth certificate will be recorded by the Vital Statistics Department of the Health Department. He may be taken to the Health Department while he is an infant for protectives and health supervision at the Well-Baby Conferences. During his school life he will probably be inspected and examined and educated on health matters by members of the Health Department staff. If he attends U.N.C. he will have his chest X-rayed by Health Department equipment and he might go to the Health Department for a premarital blood

test. Then the story begins again.

If we interpret health as the preservation of a state of equilibrium in which the individual or family can best realize their potentialities for a full and satisfactory life then we must utilize resources other than the local health department. Every well-organized health agency augments and supplements its program with that of other agencies working for good health in the community.

Such groups as the tuberculosis society, service clubs, medical societies, League for Crippled Children, child guidance clinics, dairy councils, welfare agencies, church organizations, cancer societies, Red Cross Chapters, and others give financial assistance and direct service and conduct educational programs. Many of these agencies are local chapters of state organizations which, in turn, are part of a national set up.

It is the belief of many people that the government has a responsibility for the health of its people which can be fulfilled only by the provision of adequate health and social measures. The government cannot dispense health any more than a member of the local health department. Every person will have to actively cooperate with the agency and work for his own health. Parents are still responsible for the health of their children and themselves in our country. A man's home is still his castle, even though it isn't always a safe one. Many of us have been to typhoid clinics and seen parents bring their children for immunization but back off themselves. Citizen participation is particularly important in public health. However, when families are not able to provide medical care for themselves then the government, if it follows the traditional democratic pattern, is the servant—not the master—of the people, and must make available medical care.

National good health is no accident. It is dependent upon a high level of education, a sufficiently high income among all groups of the population,

good and safe sanitation, proper nutrition and prompt and adequate preventive and remedial medical care. We say that the family unit is the foundation of our civilization, then we must

work for optimum health for each member of the family so we may have a happy community. Health is as communicable as disease in families and communities.

A STUDENT NURSE LOOKS AT PUBLIC HEALTH

BY LELON LAMBE, STUDENT NURSE
Highsmith Hospital School of Nursing
Fayetteville, North Carolina

MY two weeks at the City-County Health Center gave me an opportunity to observe and to assist in various public health nursing activities. I learned that many phases of work go to make a good public health program. It was interesting to learn that each nurse is assigned to a district and in this district she is more or less responsible for carrying on all phases of public health nursing. Sanitarians are also assigned a district, and are responsible for the protection of the community's health, through sanitation activities.

The nurse visits selected families in her district and tries to motivate them to a higher standard of living. Cases are selected in order of their importance, and include: communicable diseases, maternity and infancy cases, preschool and school children. A great deal of the work is handled in clinics which function specifically for each service. At the time that I was at the Health Center, preschool clinics were the chief ones being held. I learned, though, that many other clinics such as immunization, tuberculin testing, X-ray, and midwife classes are conducted at planned intervals. Following is a list of the types of clinics and a brief summary of each service which I observed or with which I assisted during the two weeks at the Health Center:

A. Maternity and Infancy

1. A weekly Maternity Clinic offers prenatal service and post-partum ex-

amination; also contraceptive advice to mothers who need it. There is an average attendance of 40 patients per clinic. In this clinic expectant mothers are interviewed, examined, and records are filled out accordingly. They are given a blood test for syphilis; their hemoglobin is checked and a urinalysis is done. A local obstetrician examines all expectant mothers on their first visit, and at their last scheduled visit before the baby arrives; and when they return for their six weeks post-partem examination. Advice and literature on maternal and infant care are given. Those who are interested are then referred to a nurse who instructs them regarding how they may plan for the next baby. Patients needing medical or surgical care are referred to their family physician, or to the welfare agency which assists them in securing the needed care.

2. Over thirty per cent of the babies delivered in Cumberland County are delivered by trained midwives. These midwives are taught and supervised by the public health nurses. They are allowed to accept only normal cases, are well informed as to abnormal symptoms, and call a doctor when they feel that they are not qualified to handle the case. All expectant mothers are required to have pre-natal care by a private physician or at a clinic before the midwife is allowed to accept the case. Following delivery the midwife reports the case to the Health Center and the nurse visits the mother and baby for the purpose of checking the

condition of both for abnormal conditions.

B. The Well-Baby Clinic

Mothers bring their babies and pre-school children to this clinic in order that they may maintain good health. Each patient is carefully questioned by the nurse as to her child's condition and is advised regarding diet and habits.

A local pediatrician examines each child and makes necessary recommendations for health maintenance. Immunization against whooping cough, diphtheria, and smallpox are given at this clinic. Babies needing medical and surgical care are referred to their private physicians. Literature on child guidance and care is given to each patient.

C. Pre-School Clinics

Pre-school clinics are conducted each spring in order that children of pre-school age be better qualified physically for the beginning of school. Children attending these clinics are from two to six years of age, most of them being those who will begin school the following fall.

They are weighed, measured, and examined by the attending physician who looks for any abnormal conditions and refers them to their private physician for any necessary medical or surgical care. Those children who have not already received the required vaccines for school entrance (diphtheria, whooping cough and smallpox) may receive them at this time. Advice and literature on child care are given the parents. The nurse keeps a record on each child examined, and those who have defects are visited during the summer months to assist, if needed, in obtaining corrections.

D. Tuberculosis Control

Persons who have been in contact with tuberculosis may have their chests fluoroscoped at a weekly diagnostic tuberculosis clinic conducted by the Health Officer. This may also be done for routine personal health protection. If tuberculosis is found they

are referred to a sanatorium for treatment.

The nurse visits these patients in the home in order that she may teach them precaution technique and general care. Arrested cases, and all contacts, are routinely visited by the nurse. During the past year all of the high school students of the county were offered the tuberculin test and positive reactors were X-rayed.

E. Venereal Disease Control

Venereal diseases are found through routine examination for health cards, premarital and prenatal serological tests, examination of contacts of known cases and cases who voluntarily report. A nurse interviews each case. The contacts are then visited and asked to report to the Venereal Disease Clinic for examination. Syphilis cases are referred, in the early stages, to the U. S. Public Health Service Rapid Treatment Centers for therapy. Gonorrhea cases and contacts are given penicillin and negative cultures are obtained before the case is released. A few cases receive treatment for syphilis at this clinic, but the majority are for diagnosis and follow-up examinations.

F. Orthopedic Clinic

A clinic for handicapped children and adults is held at this center monthly, serving five counties. This clinic is conducted by an orthopedic specialist and a pediatrician who examine the patients and make recommendations for treatment. Adults who are handicapped and need assistance in training for a vocation for which they are physically suited, or need other assistance are counseled by a representative of the N. C. State Rehabilitation Program.

G. Daily Clinic Services

A clinic nurse is on duty daily for the purpose of giving service and advice to all who come to the Health Center. She is responsible for registration, for assisting in examining food handlers, domestic servants, taxicab drivers, and for giving immunization against typhoid fever, whooping cough, diphtheria and smallpox. Indigent

county cases are also given simple treatments in this clinic.

Other major activities and functions of the Health Center which I had an opportunity to observe are:

A. Sanitation Program

Three sanitarians serve in this department for the purpose of protecting community health through inspection of dairies, food handling establishments, public buildings, and for giving advice on installation of private water supplies and excreta disposal systems. I went out on one inspection tour.

B. Laboratory Service

Specimens for diagnosis of syphilis, gonorrhea, tuberculosis, malaria, and intestinal parasites are examined in the local laboratory. Milk is examined to determine its safety, quality, and butterfat content. Many specimens are sent to the State laboratory. Specimens of rural water supply are also sent to the State laboratory. (The city water supply is examined in the water plant laboratory.)

C. Health Education

A trained health educator works in cooperation with members of the staff, the schools, and other agencies to further interest in public health among groups in the community. This is done through movies, radio, newspapers, distribution of literature, and planning with groups on health programs.

D. Vital Statistics

Births, deaths, and communicable diseases are reported and are on file at the Health Center. From the standpoint of public health these facts are very necessary in evaluating the work and planning the program.

I thoroughly enjoyed my two weeks at the Health Center, and would like to have remained longer. This short period, however, served to give me insight into the close relation between hospital nursing and public health service. It also made me aware of the unequalled opportunities for service which the public health nurse enjoys.

MENTAL HYGIENE IN PUBLIC HEALTH NURSING*

BY MARY F. PORTER, R.N., CLINICAL ASSISTANT
Mental Hygiene Clinic, Charlotte, N. C.

IT is good to talk of Mental Hygiene to public health nurses who daily experience the puzzlingly inadequate inter-personal relations between members of the same household and between the family and the community; between the families of school children and their teachers; between the industrial worker and his employer, and possibly between the public health nurse and the family. No group of people is more advantageously placed than you to recognize the need of and to apply in your daily contacts the principles of Mental Hygiene.

One of your national associates, Ruth Gilbert, who was trained as a public health nurse, then added to that the special education of a psychiatric social worker, wrote an excellently balanced book published in 1940 by the Commonwealth Fund and called *The Public Health Nurse and Her Patient*. Dr. Frank Walker, commenting on Ruth Gilbert's emphasis on the contribution Mental Hygiene may add to the contacts made by public health nurses, writes: "This contribution seems in the last analysis to be the engendering of a state of mind which enables the nurse with confidence to analyze and understand her own reaction toward nursing service; to appreciate, understand, and frequently do something about the reaction of persons

*Given at the Public Health Nurses Section of the N. C. Public Health Association, Charlotte, N. C., November 4, 1947.

physically or mentally ill; to recognize shoal waters and hidden rocks in family situations which may wreck the lives of growing children; and to carry her part of the team play which is necessary if there are to be effective relationships with Public Health nursing and between it and allied agencies."

In those few lines is boiled down the very heart of the attitude I should like to bring you today. First, "the engendering of a state of mind which enables the nurse with confidence to analyze and understand her own reaction toward nursing service." For example: Do you know why you chose the field of Public Health nursing out of all the specialties open to you in the nursing field? Why do you find yourself completely at ease in the Jones' home and dread going to the Brown's? The interaction of personalities always depends on at least two people and you or I are one of those two. You have doubtless long ago realized that when you are able to take yourself completely off your own mind your patients respond better. You get better results; and that when you are harried, troubled over some baffling previous situation, anxious or unhappy, or annoyed, your patients seem recalcitrant and uncooperative.

Interaction and Unity of Mind and Body. There is a psychologic, a human fact that every nurse and every social worker, everyone whose occupation centers about people and who is endeavoring to get results with and from people needs to remember constantly; i.e., that mind and body are incapable of separation; that they are not separate entities, but interact one upon the other so continually that it is often impossible to know which initiates the response. And what a tremendous potential influence toward better mental health in the family, school, in industry and in whatever field the public health nurse touches if she herself is grounded in the recognition of this essential oneness of the individual: if she has a reasoned conviction that what af-

fects the mind affects the body; what affects the body, reacts on the mind; also that she is assisting a **person** who is ill, not a case of a disabling fracture or measles or pneumonia; but a certain man, woman or child in a certain setting of family, community, economic and social situation who is ill with a disabling fracture or measles or pneumonia; and a lot of individual folks with certain problems in common but with as many approaches to the common problem as there are people of varied experience in her group.

Practically every nurse today in her undergraduate classwork learns of the effect of rage and fear and of their more chronic expressions of cherished dislikes, annoyances; and of worry, anxiety, and dread upon the physical health and the intellectual and volitional functioning.

The Irrationality of Human Beings. Miss Mary Connor states: "Public health nurses are inevitably confronted with the Mental Hygiene need at every turn." Do you realize the meaning of the fact that 58% of all hospital patients are diagnosed as nervous or mental cases? And that they represent the people too ill to be adequately helped by you and me outside of hospital grounds? Do you recognize that it is exclusive of most of the mildly maladjusted fathers and mothers, teachers, nurses, social workers, ministers, businessmen and women, yes, lawyers, doctors, industrial workers, and others whose maladjustments to life are causing one divorce in 4 (nearly one in 3 now) marriages? And what of the resultant effect on the children? That it takes no cognizance of the numberless maladjusted in so-called minor ways, ourselves and our neighbors, who through our resolved conflicts are at war with ourselves or our environment or both?

Mental Hygiene As Essential Part of the Nurses' Equipment and Technique. The need of our patients for Mental Health is only an exaggeration of our own. For no psychiatric social worker, no public health nurse, can grasp the

psychologic need of her patient until she has attained a fair amount of insight into her own adjustments and maladjustments and an objectivity about them. Only when we grasp consciously the relationship between our own tendencies under stress to revert to the rebellion of the thwarted child, or to the security or parental protection and care, can we properly evaluate the rebellious adolescent or adult patient, and the others who accept illness as a haven.

The alert public health nurse soon recognizes from baffling experience that some of her patients just don't recover when they should, despite the doctor's assurance of good physical condition and her own best efforts; and in spite, possibly, of needed financial assistance. Then, it is certainly time, if she has not done so before, to evaluate the whole situation, psychologic as well as physical. Why does Mrs. Brown's indigestion continue, although the doctor who examined her found no adequate cause? Why does Johnnie refuse to try to walk when his broken leg is healed? Why does John Brown insist that he has T.B. and remain invalided despite all findings to the contrary? Why does Jane have convulsions at school when the specialists can find no cause? Why does Dot have these attacks of excessive vomiting which interfere with school, and all medical examination reveals no cause? Why won't Billy eat normally despite his mother's urgent insistence? Why does the Jones' baby stubbornly resist habit training and remain at three a diaper problem? Why can't Bill at nine learn to read when the intelligence tests give him an unusually high I.Q. and the specialists find no vision defect? Why is Mr. Blank always irritable regardless of conditions? Why does not Mr. S. regain his strength now that he has otherwise entirely recovered from pneumonia? Why can't Johnny learn in school despite his proven intelligence? He is eleven and has not yet earned any promotions in two years. Hysteria may be diagnosed. But it must

serve some purpose, else it would not persist. Oversuggestability? Yes, but why always toward illness and not toward health? The public health nurse has had lectures in psychiatric nursing, but she has not specialized. She does not always realize that the emotional environment is often much more determining than the physical; that the tense home of marital discord, the drunken father, the humiliation of some deforming physical defect; the depressing weight of poverty or the hurt of wounded pride in having to accept relief never before needed; the lack of becoming clothes making one conspicuous before her schoolmates; the pervasive insecurity of the child who is unloved; the humiliating sense of shame about one's home condition as contrasted with those of desired acquaintances or longed-for friends; the loneliness of isolation; the poison of fear, worry, jealousy, hate . . . that conditions such as these may not only explain prolonged illness without adequate physical cause but so interfere with body chemistry and general resistance as to be medically accepted causative factors in furnishing the groundwork for many systemic illnesses and infections which would otherwise have been resisted.

What can the public health nurse do about it?

You are not psychiatric nurses, but recognizing the inescapable fact of the oneness in functioning of the mind-body you cannot escape the responsibility for alertness in recognizing the effect of the harmful environment, emotional as well as physical or economical, on the recovery of your patient. In scores of situations your own understanding can set the patient's fears at rest; your very bearing, your kindly thoughtfulness, the helpful interjection of a bit of humor to break the tension of the moment, your obvious desire to help—these are invaluable aids added to your proven ability to nurse or to show others how to nurse the patient for his physical illness. The attitude and diagnosis of the

doctor, with your own ability which comes through increased knowledge of people sick and well, will help you to know when to disregard symptoms and get the patient's attention turned to healthier channels. For the patient who tends to cling despite your friendly reassurances to invalidism, psychiatric help may be needed. Whenever symptoms continue to manifest themselves when the physical cause is cleared and your own methods have failed it is wise to turn to the most available mental hygiene authority for help, the psychiatrist, private or in the clinic. For the patient who remains "blue" who sees only the dark side, who cannot seem to get hold after an illness, a psychiatrist's help in or out of the clinic may be badly needed. For the tantrum child, the child who steals and cheats, the destructive child, the child who is not learning in school, the chronically unhappy child, the child who wants to play alone, who day-dreams to the extent of failing to meet the realities of every day; for the child who persists in prolonged masturbation; for the child who fails to talk at a reasonably normal age; for the prolonged enuretic; for the stubborn feeding problem; for all of these private psychiatrists and the psychiatric clinic exist. You public health nurses have the opportunity to recognize the problem as being well or badly handled by the family and to recommend to them a psychiatrist or a psychiatric clinic; and early help may prevent later tragedy. As public health nurses you may often see the too-good child—who not only never gives any trouble

but never is part of the crowd; the child who clings with all his might to his mother, who cries when away from her and who continues this over an abnormally long period; the child fearful of the dark and of strangers; and he usually needs wise help more acutely than the so-called bad child whose mischief disrupts the peace. Stubbornly resistant habit cases; defiant problem children; the run-away child; the child who just can't learn in school; in these extremes mental hygiene help from psychiatrist or clinic is certainly indicated, while in mild expressions of maladjustment, wise handling, preventive mental hygiene by understanding parents, nurse or teachers may be all that is needed.

But as public health nurse you see again and again the making of problem children from neglect, physical, psychologic or both; from lack of love, from over-protection by parents; from overlove as the recognized compensatory need of parents; from school and social maladjustment. You are often in position to explain the dangers and to give acceptable preventive advice, and frequently you are the best and often the only ones to advise the parents of the urgent need of psychiatric help from specialists.

Surely no profession has more need of the assistance of a Mental Hygiene approach than the one whose members come closest of any outsider to the homes where future neurotics and psychotics are being moulded through ignorance or neglect; and from which so many can be saved by early recognition and referral to trained psychiatric help.

A PUBLIC HEALTH NURSE'S EXPERIENCE AT THE N. C. SANATORIUM

BY FRANCES STANTON, SENIOR PUBLIC HEALTH NURSE
District Health Department, Elizabeth City, N. C.

EARLY in 1946, public health leaders in North Carolina decided that, because of the increased emphasis being placed on tuberculosis control, it seem-

ed advisable to give the public health nurses some special preparation in that field. In cooperation with the late Dr. P. P. McCain and Miss Eula E. Rackley,

Superintendent of Nurses at the State Sanatorium, a plan for refresher courses was worked out. The Sanatorium offered to take public health nurses for one month. Later this course was shortened to two weeks. The program of study was planned to include classes, observation, and practical experience on the wards.

Letters were sent to local health officers in April, 1946, telling of the course which was to begin in June. It was suggested that only one nurse from a given department be released at a time but eventually that every public health nurse would be given the opportunity to take the course.

In June, 1947, my turn came to go. For many reasons I welcomed the opportunity. One was the fact that tuberculosis is our number one problem, and I felt that members of the Sanatorium staff could answer some of the perplexing questions connected with our control program. Then, too, the nurses from our department who had already visited the Sanatorium gave such glowing reports of their stay, such as the hospitable spirit which pervaded the place, the good food, the relaxing effect of the afternoon rest hour, etc., that I was eager to go.

When I arrived I found that all they had said was true. I was welcomed by Mrs. Hatos, Nursing Instructor, and shown to an apartment in the Nurses Home which two other nurses shared with me. There were six nurses in our group, representing health departments from the mountains to the coast. We had Sunday night supper together and got acquainted with each other, had a good night's rest, and began classes on Monday morning.

The classes under Dr. Hiatt and Mrs. Hatos were interesting and helpful. They brought us up-to-date on the newer knowledge of the aspects and treatment of tuberculosis. We were given opportunities to observe the different types of treatment given the patients.

Last but not least we assisted with nursing care of the patients on the wards. This experience had a peculiar meaning for me as a public health nurse. I feel now that when I advise a patient to request sanatorium care, that my appeal will be stronger and perhaps have more effect because back of my words there has been experience. In other words, I am certain of what I am talking about when I describe sanatorium routine to the prospective patient. One of my ward duties was to deliver mail to the bedsides. I determined then to remind the folks at home to write to their patients often, and to write cheerful news. Nothing helps the morale of the patients more than to hear from home.

The two weeks came to a close quickly. I came back to my work feeling truly refreshed. I still remember pleasantly the spirit of friendliness which hovers over the Sanatorium community of doctors, nurses, workers and patients. The knowledge gained in classes still inspires me to try to do a better job in the control of tuberculosis. And when I grow tired, as public health nurses sometimes do, I close my eyes and recall the restful atmosphere on the Sanatorium hill among the whispering pines and the rustling oak trees. When all public health nurses have visited the Sanatorium, I hope they start around again. I want to go back.

HISTORY OF THE BEDSIDE NURSING PROGRAM IN WINSTON-SALEM AND FORSYTH COUNTY

BY MARJORIE SPAULDING, EXECUTIVE SECRETARY
Community Nursing Service, Inc.

IN 1930, a survey was made in Winston-Salem which pointed out the need locally for bedside nursing. In

March 1946, on the basis of this survey, Dorothy Rusby from the National Organization for Public Health Nursing

spoke to the Health and Family and Child Welfare divisions of the Community Council at their request. Following her visit she sent a report of a "Proposed Plan for Providing Bedside Care in Forsyth County."

The Health Division of the Community Council set up a Bedside Nursing Committee who investigated local need and recommended action. This group contacted the Medical Society, Health Department, U. S. Public Health Service, three hospitals, and the heads of social agencies. A budget and an organizational plan for a combination agency (Service set up in the Health Department) was completed.

A special committee presented the need to the Community Chest, who in turn contacted the Kate Bitting Reynolds Estate in June, 1947.

These trustees approved a grant to institute and operate the nursing program during its first year with a reasonable assurance of future support.

On the Community Council's recommendation, the Community Nursing Service was admitted as a member agency to the Community Chest in July, 1947. The Community Council organized the board of the Community Nursing Service July 29, 1947. The board consisted of 24 representative citizens and the Health Officer. A nurse loaned by the United States Public

Health Service became Executive Secretary of the Board and Assistant Nursing Supervisor in the City-County Health Department.

The Community Nursing Service began hiring personnel August 1, 1947 and have added four nurses and one clerk to the Public Health Nursing staff. These public health nurses were placed in the City-County Health Department. All public health nurses (employed by the City-County Health Department and the Community Nursing Service) include bedside care in their generalized public health nursing programs. A proportionate amount of the total nursing time is spent in this new service.

The City-County Board of Health, Medical Society, Board of Alderman and County Commissioners approved the program. The Community Nursing Service has been incorporated as a non-profit organization.

On November 12, 1947, the new service became available to people in Winston-Salem and Forsyth County. All bedside care is given under the medical supervision of the patient's private physician. This service is on a graduated fee basis (from \$1.50 an hour to free) individually decided. So far, one out of every four visits has been a full fee visit. To date (January 28, 1948) 350 visits have been made to 166 patients.

WELL BABY CLINIC

By AGNES CAMPBELL, SENIOR PUBLIC HEALTH NURSE
Iredell County Health Department, Statesville, N. C.

LAST October the Junior Service League of Statesville approached the Iredell County Health Department for suggestions for a project which their organization could sponsor. We gave them two alternatives—a well baby clinic or a dental clinic.

The young women felt that the importance of a child's first year of life warranted the best it is possible for him to have by insuring him with the right start through a well and happy

childhood. Thus, plans got under way to begin the clinic.

Mrs. David Pressly, a most capable person, was appointed chairman of the project. The first meeting with the Junior Service Committee and the Health Department formulated plans for procedure of the clinics and for publicity discussions.

The publicity was begun with a radio program, followed up with poster display in downtown store windows, com-



mittee meetings in different sections of town.

Discussions in the committee meetings outlined time and place of clinic, procedure and the class work for information to mothers before clinics.

The results of this publicity were so very successful that not only Statesville, but all of the county were talking the well baby clinic. Proof of this success, too, was the unexpectedly large attendance at the clinic—so many responded in fact that there was no time for the thirty minute class periods. To take care of this situation, the fourth Thursday in each month was designated as class period day.

In the first white baby clinic there were twenty-five babies and fifty-four for the second clinic. The first Negro clinic brought in ninety-seven babies and eighty-nine in the second.

Limited time and personnel make it necessary to include a great deal in

each class discussion. There classes include information for both expectant mothers and mothers with babies. Miss Anita Jones in her institute on Maternal and Infant Care held in Chapel Hill last September gave us many ideas for conducting this clinic and choosing the material for the class discussions.

The Junior Service League is to be highly commended for their fine co-operation in this project. They send at least four volunteers to each clinic; one who registers the babies, one who controls traffic, one who helps with the dressing and undressing of the babies, and one who helps the nurse weigh and measure the babies.

Six local doctors have volunteered their service meaning that each comes twice a year to a clinic.

This project shows that public health nursing truly lies in the hands of the lay public and that its ultimate success lies in a better informed public.

IDELL BUCHAN MEMORIAL LOAN FUND

BY LOUISE P. EAST, CHAIRMAN OF LOAN FUND COMMITTEE

AT the annual meeting of the North Carolina Public Health Association which convened in Charlotte, November, 1947, the members of the Public Health Nurses' Section voted unanimously to raise and perpetuate a loan fund in honor of Miss Idell Buchan who died June 7, 1947, after 28 years of service as a public health nurse.

Miss Buchan was known and respected throughout the length and breadth of North Carolina, and she was beloved by a host of friends of all ages and walks of life.

The loan fund committee plans to raise the sum of \$500.00 which will be administered from Chapel Hill for the

benefit of public health nurse students from North Carolina who attend the School of Public Health at the University of North Carolina.

No funds will be personally solicited for this memorial fund, but to friends of Miss Buchan who knew of her untiring efforts in promoting good health for the citizens of the State and her interest in better education and preparation of young nurses, we offer the privilege of contributing to this fund if they care to do so.

Contributions should be sent to Miss Margaret Blee, School of Public Health, University of North Carolina, Chapel Hill, North Carolina.

A TRIBUTE TO MISS LAURA NIBLOCK, A PUBLIC HEALTH NURSE

BY MISS AMY LOUISE FISHER, R.N.
Supervising Public Health Nurse
State Board of Health, Raleigh, N. C.

AFTER several months of illness, Miss Laura Niblock was released from suffering and passed to her reward on December 29, 1947. She leaves behind two sisters—one a missionary in Siam and the other a nurse in Statesville. She will be missed by her co-workers in public health. She was a graduate of Long's Sanatorium School of Nursing in Statesville and took the course in Public Health Nursing at George Peabody College, Nashville, Tennessee. After working in Tennessee and Virginia, she returned to North Carolina and was employed as a Public Health Nurse from September, 1936 until she resigned because of illness in August of 1947.

A letter from Dr. Alfred Mordecai, the last health officer with whom Miss Niblock worked in the Davie-Stokes-

Yadkin District Health Department, pays a fitting tribute to her memory:

"Miss Niblock served under me for nearly two years, and I came to know her well. She was a woman of fine character, well informed, resourceful, dependable, and efficient. She was a willing worker and a cheerful worker—even under trying circumstances. She came up in the days when people respected authority and earned all they made, and she never changed. She was able to carry on by her own initiative to a great extent and exercised good judgment at all times. She always faced life and its trials bravely without a whimper, and I became very fond of her. She accepted her hopeless affliction without fear or quavering and faced death with the same gameness that she had faced all the trials of life."

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Health Bulletin
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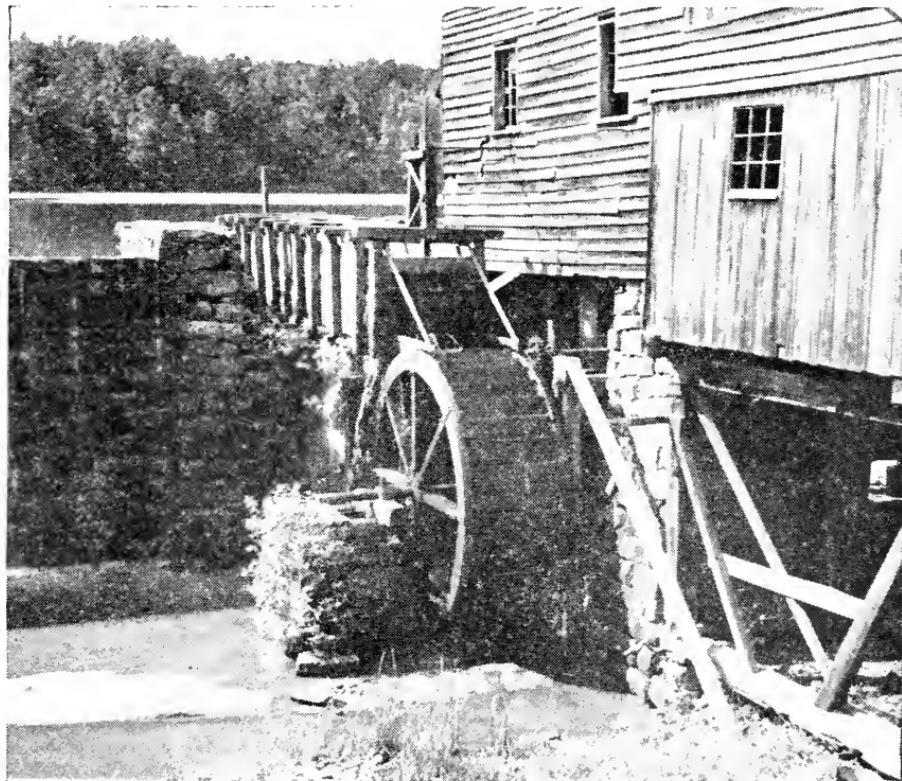
This Bulletin will be sent free to any citizen of the State upon request

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

MARCH, 1948

No. 3



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly **THE HEALTH BULLETIN**, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
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Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters.)	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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THE Health Bulletin

PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 63

MARCH, 1948

No. 3

CARL V. REYNOLDS, M.D., State Health Officer.

JOHN H. HAMILTON, M.D., Acting Editor

DOCTOR REYNOLDS RESIGNS

February 19, 1948

Dr. S. D. Craig, President
N. C. State Board of Health
Winston-Salem, N. C.

Dear Doctor Craig:

For sometime divergent forces have been preying upon me:—from within, the abiding desire for “service before self.” and from without, the desire of the family for my retirement.

The persuasiveness of the family won; and, in consequence, I am asking that the Board accept my resignation as of June 30, 1948, or as soon thereafter as a successor can be appointed to fill my unexpired term.

All my professional life, I have had an unquenchable desire to render a service to the underprivileged masses. The past thirteen years, serving as your Secretary and State Health Officer, have given me this opportunity. I have, under your intelligent direction, and with the support of well-qualified, loyal, enthusiastic directors and their personnel, given my best toward an unfinished job.

I shall ever cherish my reappointments as a satisfaction of services rendered. I have always been fond of my work, and the advances made are due

to the united effort and enthusiastic interest in bettering the moral, mental and physical standards of life, and to lowering poverty, sickness and death, in order that we may have a happier and more abundant life.

To sever my connection from the State Board of Health, is a real sacrifice.

With regards and best wishes, I am
Most sincerely,
r/e Carl V. Reynolds, M.D.

President Craig read Doctor Reynolds' letter of resignation as Secretary and State Health Officer, effective June 30, 1948 or as soon thereafter as a successor could be appointed. President Craig stated that this letter showed Doctor Reynolds' big heart, big mind, and love for humanity. Because of Doctor Reynolds' resignation, Doctor Dixon moved that the Board express to Doctor Reynolds its sincere appreciation for the work that he has done with, and for the Board of Health, and for North Carolina as a whole, during the past thirteen years as State Health Officer, and that it is with sincere regret that they accept his resignation. Motion seconded by Doctor Haywood, and unanimously carried.

CANCER DIVISION

NORTH Carolina's intensive fight against cancer was launched officially March 1, when the Cancer Control Division of the State Board of

Health began operation, with Dr. Ivan M. Procter, of Raleigh, as its director and Mildred Schram, Ph.D., of Philadelphia, as his associate. They have

been assigned offices in the Health Building, on Caswell Square. For sometime consultations between Dr. Carl V. Reynolds, State Health Officer, Dr. Procter, and others directly interested in getting the program started had been under way, with a view to working out arrangements which could be put into effect immediately with the creation of the Cancer Control Division.

Dr. Procter is a specialist in obstetrics and diseases of women, and practiced in that field of medicine for more than 25 years, in Raleigh. For the past five or six years, he has made an extensive study of cancer, including its cause, diagnosis, management, prevention, and methods of control.

Dr. Schram, formerly of Saint Louis, Missouri, served from June, 1932, until January of this year, as executive officer of the Donner Cancer Foundation of Philadelphia, formerly the International Institute of Cancer Research, which, until its program was interrupted by the war, sponsored projects in various parts of the world. During her activities in Philadelphia, Dr. Schram planned and organized a series of cancer prevention clinics, first in five teaching hospitals in Philadelphia, the number having grown to eleven, to include a group of non-teaching hospitals.

She was a delegate to the International Cancer Congress in Madrid, in 1933, a guest of the Research Institute, Royal Cancer Hospital, London, and one of eleven American women cited for service in cancer control by the American Cancer Society.

The associate director arrived in Raleigh the first of the week, and expressed herself as being highly pleased with the North Carolina program, which, she believes can be made an effective weapon in combatting cancer, by bringing it out into the open, where it can be attacked at its source.

In pursuit of his intensive study of cancer, Dr. Procter has made personal visits to clinics in Georgia, Virginia, Pennsylvania and New York. Prior to the war, he engaged in post-graduate

study in London, Berlin, Prague, and Vienna.

Dr. Procter is a member of the Cancer Committee of the North Carolina State Medical Society, also a member of the Executive Committee of the North Carolina Division of the American Cancer Society, having formerly served as its chairman. He has published numerous articles on cancer of the breast and uterus.

Authority for Program

The authority for the cancer program is a legislative act of 1945, introduced in the North Carolina General Assembly as House Bill 786, in cooperation with the Cancer Committee of the North Carolina State Medical Society, as an advisory agency, and with the active participation of the North Carolina Division of the American Cancer Society, the program to be administered by the State Board of Health, through its newly-created Division of Cancer Control.

Funds with which the cancer program will be carried on are from three sources: State legislative appropriation, through the State Board of Health; United States Public Service, from Congressional appropriation, and the North Carolina Division of the American Cancer Society.

Procter Outlines Objectives

Upon assuming his duties, Dr. Procter outlined the policy to be followed in North Carolina's intensive war on cancer.

"The primary object," he said, "will be to render the greatest amount of cancer control service to the greatest number of citizens of the State, in the shortest time practical."

He continued:

"This service will be permanent, subject to future appropriations from the Legislature.

"The program is to be conducted locally through the Board of Health, in cooperation with the physicians comprising the Medical Society of the county in which a clinic is located.

The local physicians will render the professional service."

Clinics: Type, Number

Describing the clinical services to be available when the program gets under way, Dr. Procter said: "There will be two types of clinics. Detection clinics will be operated in both the larger and smaller communities of the State. These will be the medium of (1) screening the largest number of applicants, in order to find cancer in its earliest stages and while almost completely curable, (2) to educate the public in prevention, through early diagnosis and cure, and (3) to establish annual examinations among applicants.

"North Carolina," Dr. Procter disclosed, "is to have a new type of detection clinic. Limited examinations will serve three times as many people.

The present standard detection clinic operating in the United States consists of a complete and detailed history, physical examination, laboratory and X-ray test. This is a health maintenance type of detection.

"In North Carolina it will be the desire and policy of the Board to devote its funds and efforts to cancer detection and control, leaving the general health maintenance to the patient

and practicing physician. The physical examination will be limited to those parts of the body where cancer most commonly occurs and is detectable and curable.

"Disposition of those examinees who have positive findings will be referred to their personal physician. Examinees without a personal physician will be asked to select one from a list prepared by the local county medical society.

"Cancer diagnostic and management clinics will be established in cities where the services of pathologists and other specialists are available. Suspected cancers located in detection centers will be referred to cancer diagnostic clinics for final diagnosis and recommendation as to management. The patient will be returned to his or her personal physician for treatment.

"Clinics, where practical, will be conducted in hospitals approved by the American College of Surgeons, but all cancer clinics must be approved by the American College of Surgeons."

"There will," Dr. Procter said, "be seven diagnostic cancer clinics and 10 detection clinics."

Dr. Procter foresees a minimum of 50,000 examined annually after the program is in complete operation.

THE GOVERNOR ISSUES A STATEMENT*

THE PUBLIC AND THE MEDICAL PROFESSION

WITH the possible exception of the Christian ministry, there is not, I think, a higher calling among men than that of the medical doctor. The clergyman is supposed to diagnose and prescribe for ailments of the soul, and the one who cannot do just that should take stock of himself. The medical doctor diagnoses and prescribes for bodily ills. Together, the minister and the doctor exercise a definite custodial care over humanity from the cradle to the grave, each helping to bring the individual into a more abundant life—here and hereafter.

No attempt will be made to become technical in this brief discussion of what should be the layman's attitude toward the doctor. Certainly there will be an absence of medical terms, for the very obvious reason that I am in no way familiar with such terms.

But is the medical profession technical in its dealings with the layman as was once the case? To all appearances, the profession is emerging from the maze of technicalities which formerly resulted in an aloofness on the part of the uninformed layman. Time was when the doctor, having arrived at

the patient's bedside by horse and buggy, would put on a grave expression as he applied the stethoscope, inserted the fever thermometer under the tongue, looked at the whites of the eyes, and felt the pulse. "Umph-humph," he would say, with a far-off look in his eyes. Then he would take pencil and pad, write a prescription in Latin, give certain directions which must be followed, and depart, to return later in the day, tomorrow, or perhaps in a few days, as the condition of the patient might require.

This gave the sick person and members of his household a sort of fear of the doctor, as if he knew more than he was willing to tell about the patient's condition, or perhaps, his nearness to death.

Time was when a doctor would no more have addressed a group of laymen, in their own language, than a preacher would have delivered a sermon at a football game. But now both the doctor and the preacher are becoming more practical.

There has been, for some years now, a growing tendency on the part of the doctor to meet the layman on terms of the latter's understanding; to throw aside secrecy and formality, and to substitute plain American talk for Latin prescriptions. That is as it should be.

In the promotion of this growing spirit of understanding between doctor and layman, public health, no doubt, has played an important role. Working with both in the field of preventive medicine, this already existing and well established governmental agency—both the State Health Department and The United States Public Health Service—may be considered a "liaison officer" between the doctor and the average citizen. The obligation resting on public health is not only to afford mass protection, but to educate the public to the importance of good medical care—through the private practitioner where the patient is able to pay, and at public expense if the patient is indigent.

Mass protection against certain com-

municable diseases is, of course, a benefit that is extended to all, without charge, because no population that is half sick and half well can be 100 per cent efficient. Moreover, communicable diseases can be transmitted from pauper to prince, and vice versa. Therefore it is the business of government, now so recognized by all, to set up and maintain conditions conducive to the good health of all—by means of immunization, sanitation, and other measures carried on at public expense. Disease knows no barriers. It does not respect territorial lines. Especially is this true in this day of rapid transportation, when the remotest parts of the earth are within a comparatively few hours' flying time from any part of the United States. Communicable diseases heretofore unknown in this country exist in these remote sections, and can be imported from them. Therefore, it is necessary that our people not only become immunized against all preventable diseases, but also remain on guard against those ailments about which, at present, we know little, but which could easily be transmitted to us from distant parts of the world.

Hence, the importance of mass protection.

Aside from those communicable diseases against which means of immunization have been discovered, however, thousands of persons die every year in North Carolina and other states as the result of the chronic or degenerative diseases of middle and late life, against which the chief protection is early diagnosis.

While it is recognized that doctors consider it unethical to advertise—certainly as individuals—it would appear to be perfectly proper for the medical profession to establish and maintain relations with the lay public, in order to let the people know just what it has to offer in the way of early diagnosis and other preventive measures.

In 1942, the House of Delegates of the American Medical Association voted its approval of the extension service of local health departments through-

out the United States. In September, 1945, the official Journal of the Association declared editorially: "Until the most remote American family has access to accepted modern public health services, the nation's health will not be properly served. Expansion of public health activity, long advocated and pioneered by the medical profession, is a more sound and logical step toward improving the nation's health than many grandiose plans for medical care."

Public health, in its role of "liaison officer" between the laity and the medical profession, can and should serve a still larger purpose than it has ever served before. The medical profession, on the other hand, should seek still wider contacts with the public, through public health personnel. Public health is the child of organized medicine. No North Carolina doctor who has studied the history of his profession in this state is ignorant of the vision which was caught and held, more than seventy years ago, by Dr. Thomas Fanning Wood of Wilmington. That vision was translated into legislation which created, in 1877, the State Board of Health, which for a while was the State Medical Society. Later, the form of organization was changed, and the duties of the Board of Health were delegated to a board composed of members of the medical and allied professions, elected by the State Medical Society and appointed by the governor.

Here are some interesting facts, from which might be gathered many suggestions as to how the public and the medical profession may work together more closely in the promotion of the general health of the people:

In 1921, the ten leading causes of death in North Carolina were, in this order: heart diseases, tuberculosis, apoplexy, nephritis, pneumonia and influenza, diarrhea and enteritis, prematurity, non-vehicular accidents, pregnancy, and senility.

In 1946, the ten leading causes of death in our state were listed in this order: diseases of the heart, apoplexy,

nephritis, cancer, pneumonia and influenza, prematurity, non-vehicular accidents, tuberculosis, motor vehicle accidents, and diabetes.

Compare the two lists and note the changes. Tuberculosis, for example, dropped from second to eighth place. Cancer, not in the first list, was fourth in the second.

Why the decline in tuberculosis? Because we did something about it—and we are going to do more. Two things are important in our fight against the Great White Plague. We must separate the infectious from the non-infectious patients, and we must use every means at our command to detect cases in their early stages, in order that the disease may be arrested and cured. In the mass surveys being made under the supervision of the State Board of Health, approximately a quarter of a million chest pictures had been made through December, 1947. The number of lives that will be saved as a result, no one can say. Those patients found to be infected are referred to their family physicians.

There is a group of diseases, however, against which we have not made the progress that we have against tuberculosis. We have prolonged life by immunizing against preventable communicable diseases, many of which occur among small children. But many of the dangers that still confront our citizens of middle and late life remain to be reckoned with. We have referred to these generally; let us be more specific. Of the 15,482 deaths which occurred in North Carolina during the first half of 1947, 8,196, or more than half, were attributed to four causes: diseases of the heart, 3,779; intracranial vascular lesions, 1,736; nephritis, 1,390; and cancer, 1,291. Being a layman, I hesitate to make suggestions about the handling or treatment of human ailments, but there are certain observations which even a layman may make with impunity.

The above figures, it would appear to the most casual observer, emphasize

the importance of periodic check-ups by a qualified medical doctor.

The matter of education to the importance of a closer relationship between the doctor and the layman has two sides. The layman should be informed as to the importance of seeking the services of the doctor; and the doctor should impart to the layman the information so necessary to his well-being.

It has been pointed out that one of the chief functions of public health is to refer those in need of treatment to the family physician. Indigent patients, of course, should be taken care of at public expense. But those able to pay should be referred to the private practitioner, because we have been wise enough, so far, to steer shy of socialized medicine, contract practice, and other radical policies which not only undermine free enterprise but encourage the appearance of political preference on the scene. The medical pro-

fession should be kept as free from politics as the Christian ministry.

What can the doctor do to educate the people to the value of the services he can render, without advertising himself in the accepted sense of that term? That is a matter for the doctor to work out. And it is being worked out, but means of educational programs, conducted through publications and over the radio. It is to be hoped that these programs will be continued and broadened in their scope, until every citizen of every age will know that his physical well being lies in the hands of the qualified medical doctor. When education as to the value of medical assistance, in time to prevent as well as to cure, becomes universal, we may expect a reduction in sickness and death that will exceed our fondest expectations.

*The North Carolina Medical Journal,
Vol. 9, February, 1948.

STORK'S BUSIEST YEAR WAS 1947

BY MR. WILLIAM H. RICHARDSON

State Board of Health, Raleigh, N. C.

ON March 3, 1943, the North Carolina Legislature elected the Cardinal to be the official bird of this State. A beautiful specimen of feathered beauty—proud, gay songster, the Cardinal lives in North Carolina the year-round, come hot or cold. Even during the recent series of snow and sleet storms that harassed the State, week after week, the Cardinal remained in evidence, competing with the sparrow and the pernicious starling for crumbs thrown out on the snow.

The Cardinal is a fine bird, or, presumably, he could not have been elected by the North Carolina Legislature. Of course, he is red; but, certainly, there is no political implication there.

However, when it comes to work, there is one bird that has outdone all others during the past several years,

especially in 1947—and that is the stork. There's a **bird** for you! He outdistances his own records, without apology. He works overtime, and sometimes makes plural deliveries of the precious cargo he transports.

During 1947, according to the provisional report of the Bureau of Vital Statistics, the stork delivered 113,020 live babies in North Carolina, an increase of 12,425 over the previous year, giving this State a birth rate of 29.3, the highest since 1925, when a birth rate of 29.7 was recorded. There was an increase of three points in a single year, the 1946 birth rate in North Carolina having been only 26.3.

It is also encouraging to note that the infant mortality rate last year was only 35.4, as compared with 37.9 the previous year, a decrease of 2.5. The

infant mortality rate is based on the number of babies under a year old who die, for every one thousand live births. The maternal death rate last year was 1.8, compared with 2.0 the previous year. This rate is based on the number of mothers who die for every one thousand live births.

Births outnumbered deaths in North Carolina last year, by between three and four to one. While there was an increase of between 12,000 and 13,000 in the number of live babies born, there was an increase of only a thousand in the number of deaths. Stating it another way, there were 82,768 more births than deaths recorded.

What does this enormous increase in the number of births—and in the birth rate—mean? It means, among other things, that the **responsibilities** of those charged with the health and education of the young already have been broadened, and that these responsibilities will increase with the passing years. The 113,020 children born in North Carolina last year and the 100,595 born the proceeding year will have to be safely guided through the perils of infancy and childhood. If they are to be brought up as healthy children, they must be immunized against preventable diseases; they must be provided with proper food and clothing; they must, within a few years, be admitted to the schools of the State—and, throughout all this period, they must be cared for by their parents and guardians. Note carefully this fact: During the past seven years, 663,074 live babies have been born in North Carolina. What does this mean? Consider this figure in relation to your own individual responsibility as a citizen, parent, teacher, minister of religion, minister or medicine—or public official. You can't escape it. How are you going to meet it?

Is North Carolina a healthy State? That depends upon who is writing the story. If the author is one of those who sees no good in the South or in any of the States comprising it, we might be rated as a Class C State. It depends upon what yardstick is used.

We are not going into any controversial discussion, but you might be interested in knowing what progress North Carolina has made against certain diseases that formerly claimed far more lives than they do at the present time.

In 1947, for example, there were just six deaths from typhoid fever in this State, the rate having been 0.2 out of every 100,000 inhabitants. Just ten years ago, the typhoid fever death rate in North Carolina was 2.1 per 100,000 population, and in 1914, the first year for which records are available, it was 35.8. How has this reduction been accomplished? Through sanitation and immunization against a disease of which hundreds formerly died in this State every year, compared with a half dozen last year.

There were thirty-three deaths from diphtheria last year, when there should not have been one, as diphtheria is now known and proven to be a preventable disease. In 1914, the death rate from diphtheria was 15.8, compared with 0.9 last year.

North Carolina's death rate from pulmonary tuberculosis last year was only 25.4 per 100,000 inhabitants, as compared with 27.9 in 1946—and more than 130 in 1914.

Death rates from diseases of middle and late life, known as degenerative diseases, continue to climb, in the face of the remarkable gains we have made in combating and suppressing those classed as preventable and controllable. For example, of the 30,252 deaths from all causes reported to the State Board of Health last year, 13,643 were caused by diseases of the heart and circulatory system. Infant diseases caused 2,682 deaths, making a total of 16,325 fatalities among the very young and those in middle and late life.

It is interesting to note that, during 1947, there were only two deaths from malaria reported among North Carolina's nearly 4,000,000 people, as compared with 12 the previous year, the 1947 death rate from this disease, formerly so common in North Carolina,

having been only 0.05 compared with 10.8 in 1914. What the rate was before the cause of malaria was definitely and scientifically established, and before records were kept, no one can even guess—the “good old days,” when quinine was as much a part of the diet in certain sections of North Carolina as bread. Time was when people thought they could “see” malaria in their drinking water. We now know they can’t; malaria is transmitted by mosquitoes.

The death rate from whooping cough, for which there is now a known preventive, has been materially lowered in recent years, the decline, according to official tabulations, having begun even before the law requiring immunization was passed. Last year 54 North Carolina children died of whooping cough, with a rate of 1.4 per 100,000 inhabitants. In 1914, the rate was 18.7. It climbed to 28.5 in 1918 and later began to show a sustained decline, the rate fluctuating with the periodic occurrence of epidemics, but it has not been above 10 since 1934. Whooping cough ought to be stamped out, and it appears likely that it could be—practically so, anyway—if parents would obey the immunization law now on the statute books.

It is well to point out in passing that Public Health, always a staunch advocate of proven preventives, does not insist upon immunization against any disease until the immunizing agent is known to be effective. In other words, if you are a parent, or an adult, concerned only with your own health, you can trust your Public Health Department not to advocate the employment of doubtful methods in protection against disease, whether in the infant, the small child, or the mature man. When a known preventive is discovered, Public Health is not satisfied until it can prepare that preventive in its own laboratories, in order that it be made available to the citizens of North Carolina, if this is possible.

The journey to Utopia has not been completed by any means—Utopia may be millenniums away. But we have made progress in our war on disease and death and we shall continue to do so, with the help of science and an enlightened and cooperative public. Yes, we have come a long way, from a crude death rate of 12.4 per thousand inhabitants in 1914 to 7.8 in 1947—but the terminal is still many miles down the track.

NEW PUBLIC HEALTH NURSING COURSE AT N. C. C. IN DURHAM

MISS Esther Henry, R.N., B.S., M.S., of New York City, Director of the course of Public Health Nursing has been appointed. Miss Henry has a rich experience with official and non-official agencies. During the first days of February she was busy with organization and answering inquiries of applicants. The appointment of Miss Henry and the opening of the first post graduate course in public health nursing at North Carolina College is the realization of a dream of the late Dr. James E. Shepard.

PUBLIC HEALTH NURSING CURRICULUM EXPANDS

The Department of Public Health Nursing, School of Public Health, is pleased to share with its alumnae and friends a description of a new course. P.H.196: Special Fields has been added as a requirement for candidates for the Certificate and also for the degrees.

The purpose of the inauguration of this particular course is to satisfy the manifold requests that are continually being made to the Department of Public Health Nursing. The ever increas-

ing demands made on Public Health Nurses indicate that in order to keep abreast with the expanding services, knowledge of these Special Fields is essential. A nationally known authority, a specialist in his field, will be in charge of each subject presented. P.H.196: Special Fields in Public Health Nursing carries 5 quarter hours of credit. This course is designed for consideration of the functions and responsibilities of Public Health Nurses in the various phases of public health, not already included in Maternal and Child Health Services in P.H.195 and P.H.190. It covers particular fields of public health nursing which require adaptation in organization and administration. These fields include: Mental Hygiene, Cancer Control, Geriatrics, Tuberculosis Nursing, and Orthopedic Nursing. The selection of the subjects included are based on the following:

Mental Hygiene

Never before in history has the need for Mental Hygiene been greater. Public Health Nurses should be aware of the emotional and mental climate that surrounds an individual. The importance of principles of Mental Hygiene cannot be over-emphasized. Dr. Esther Loring Richards clearly points out: "Perhaps more than any other agent in helping in the return to health is the Nurse." In order to enrich our knowledge and to increase the effectiveness of our work this course is presented.

Cancer Control

Cancer ranks second as the highest cause of death. The mortality rates are increasing. Authorities in this field point to the dark cloud appearing in the future statistical horizon. It has been said there is every reason to believe that unless further progress is made there will be 82% more deaths from Cancer in 1980 than 1940. The American Cancer Society states that Cancer strikes on an average of one out of two homes. It is accepted that if delay in diagnosis could be reduced many lives could be saved. Public

Health Nurses are in a strategic position to make a definite contribution to Cancer Control. A higher degree of interest generated by a generous fund of knowledge is needed.

Geriatrics

The extension of the life span has increased by 35% the number of people over 65 years of age or older. The benefits of the achievements of Medical Science and Public Health must envelop these senior citizens. Public Health Nursing has long been interested in Maternal and Child Health. School Health has rightly claimed our attention. An avalanche of articles both in medical and popular literature reveals a deepening interest in Geriatrics. There is considerable evidence that a shift in emphasis in Public Health Nursing is indicated. Therefore, this part of Special Fields will not only increase ones knowledge of the problems of old age but will serve to stimulate interest in programs devoted to Geriatrics.

Tuberculosis

Although the mortality rates of tuberculosis are declining, there is still a great felt need among Public Health Nurses that this important subject should be given special consideration. If the progress that has been made is to continue it is imperative that Public Health Nursing expand its efforts and its scope. Therefore, in order to sharpen our techniques, to clarify our perspectives and to acquaint ourselves with newer knowledge of therapy, this subject is offered.

Orthopedics

The emphasis in this course will be placed on the positive and preventive aspects of Orthopedics. Body mechanics and posture and integral factors in health. With the initiation of Orthopedic courses to be placed in all graduate and undergraduate courses, it is believed that this course holds a prominent place in Special Fields. When the principles of Orthopedics are understood they may be integrated in var-

ious phases of Public Health Nursing such as Maternal, Child Health, School Health, Tuberculosis and Geriatrics.

Advantages

The advantages of this course are three-fold. It offers to the regularly enrolled students or nurses an opportunity for instruction in a variety of timely subjects. Those who wish to enroll for one quarter of work during the summer may receive instruction in the

five subjects offered during a short period of time. To those who cannot be released from the ever pressing work of an agency for five weeks period, it is possible to enroll for one week. Those who wish may enroll for any week which holds greater interest for them.

While this course is designed especially for Public Health Nursing, Community Workers, Social Workers, Health Educators, Teachers, and interested people are invited to enroll.

REVISION OF THE COMMUNICABLE DISEASE REGULATIONS

ON December 14, 1944, the State Board of Health adopted a complete revision of the Communicable Disease Regulations. Since that date four additional minor changes have been made. In order that these later revisions may have the full effect of law, it is required that they be published in the **Health Bulletin**. The revision of the malaria regulation has been published previously. The remainder are herewith presented.

On December 5, 1945, Regulation 45, pertaining to scarlet fever was revised by changing the wording in the third paragraph of Section K to read: "Susceptible contacts of any age who are not residing on or who have moved away from the premises where the disease exists shall not attend or be employed in any such school until seven

days after their last exposure and a written permit has been obtained from the local health or quarantine officer."

On May 14, 1947, Regulation 34, pertaining to meningococcus meningitis, was revised by rewriting Section H to read: "Contacts shall be quarantined for fourteen days from the last exposure or until prophylactic treatment has been given unless a written permit is obtained from the local health or quarantine officer."

On May 14, 1947, Regulation 58, pertaining to whooping cough, was revised by adding the following sentence to Section E: "The immunization of children against whooping cough before the age of one year is required by Section 130-190.1 of the General Statutes of North Carolina."

FEW CHILDREN GET FULL HEALTH CARE ADVISED IN EXAMINATIONS

Chicago Study Of Children In Low Income Group Reveals Less Than One Third Complete Services Recommended

THE time and effort spent on physical examinations of children is in the main wasted unless the remediable conditions discovered at these check-ups are actually corrected, Martha

Crumpton Hardy, Ph.D., Chicago, chairman of Child Research of the Elizabeth McCormick Memorial Fund, points out in **The Journal of the American Medical Association**.

Dr. Hardy reports on a discouraging follow-up of a group of 1,068 Chicago children representing 446 families, who had been examined by the pediatric

staff of the Elizabeth McCormick Memorial Fund between September 1942 and August 1943. The inquiry was a part of a joint investigation conducted with the Aid to Dependent Children Service of the Cook County Bureau of Public Welfare, since the children were receiving grants as dependent children.

Some Health Service Needed By 97 Per Cent

The average age of the children was 10, and the average annual income of their families was around \$1,100 in 1942-1943. They were all so-called "well children," selected from all areas of the city, and no pressure had been exerted on their families to have them examined. The examinations had revealed that 97 per cent needed some type of health service. Medical attention was advised for 73 per cent, dental services for 67 per cent, protection against either diphtheria or smallpox for 53 per cent. "The most frequent specific problems noted by the physicians as requiring medical attention," Dr. Hardy writes, "concerned tonsils, orthopedic abnormalities, eyes, conditions of the genitourinary system and of the ears and skin. The incidence varied from 31 per cent in the case of tonsil conditions to six per cent for skin."

After the mothers had been told about the remedial care needed, case-workers visited the families to help plan ways and means of securing the advised services at various clinics. From September 1942 to January 1946 periodic checks were made whenever possible, both with the families and with the health agencies, on the care actually secured. In this way it was possible to follow up 789 children representing 328 families for an average period of approximately two and a half years.

Medical Care Least Likely To Be Completed

According to Dr. Hardy, analyses of the records of these 789 indicates that "attention to some of their needs was secured in the majority of cases but that less than one third of the children obtained all the care advised." Only

37 per cent of the children needing medical care secured all that was advised. In 29 per cent of the cases where a tonsil operation was advised the families apparently did nothing about it, for example. As an even more serious example, twenty-three per cent of the children who were referred to a cardiac clinic failed to go and an additional 27 per cent who were known to require supervision were not receiving it.

So far as the other services were concerned, the record was somewhat better. Fifty-one per cent of those needing dental care received it, and 60 per cent of those advised to be immunized against certain diseases completed this service.

The reasons for the general failure to complete all health services, Dr. Hardy believes, were numerous. An attempt was made by most of the families: only seven per cent failed to report at least once to either a clinic or a private physician or dentist for some part of the services advised. But each child usually required care for several different conditions.

Many Difficulties In Receiving Remedial Care

"The reason most frequently expressed by the families for their failure to return for care, and also for their failure to report at all, was that the children seemed well. . . . [But it also] seemed to numbers of them that the clinic failed to realize the difficulty that the mother faced in keeping the various appointments for individual children made for different times instead of for the family as a group. Many complained of the numerous visits to different specialized clinics before the advised care for even one child could be carried out. They referred to the great distances they had to travel, the problem of taking a number of children to and from clinics, and the children's unwillingness to continue under clinic care. . . . Then, too, after the family had received some medical attention, if hospitalization or surgical treatment was required immediate care was usually not possible."

THE ORGANIZATION OF LEE COUNTY HEALTH DEPARTMENT

BY LOUISE CROOM, R.N., SENIOR PUBLIC HEALTH NURSE

THE Lee County Health Department opened its doors in Sanford on September 15, 1947. A couple of weeks prior to the opening, Mrs. Edith Brocker, Supervising Nurse, and I took off from Chapel Hill, clad in our blue and white seersucker uniforms to investigate living quarters and to meet some of the people. When we arrived in Sanford, we called on representatives of the official agencies and interested citizens. We did not feel too well dressed when we made an official call on the Mayor and were ushered into mahogany paneled office with a deep pile rug on the floor and a beautiful mahogany desk in the corner. Before our visit to the Mayor's office, we had called on Miss Gaynelle Hogan, Home Demonstration Agent, and found that she was in Raleigh at a meeting. At this time, we met Mr. J. D. Pegram, Superintendent of the Welfare Department. We also visited Mr. J. E. Walker, Secretary-Treasurer of the National Farm Loan Association and found him out of town. Mr. Walker had visited the Chapel Hill office and we had met him at that time. We next visited Mrs. W. F. Wood who had had charge of the Red Cross Tuberculosis Seal Sale for quite some time. Mrs. Wood gave us a great deal of information in regards to Sanford and Lee County.

Several members of the Women's Club and the Home Demonstration Clubs had visited such departments as Durham Health Department in order to observe the workings of a full-time department. This was done in the interest of organizing the Lee County Department. And we feel that the agriculture people did a great deal in laying the foundation for our work.

On Monday morning, September 15, 1947, I arrived at the Health Department which is located on the second floor of the Court House Annex in

Sanford. The office consists of one room. The room was very bright and cheerful with its coat of new white paint. Mr. Hugh Talley, Sanitarian, had had his office in this room for a period of six months. The Department hopes to have adequate office space someday in the future. This Health Department family all work in a room 18 x 13 with the furniture consisting of two desks, three tables, one typewriter and table, electric refrigerator, seven straight chairs, six 12 x 18 file boxes in addition to a tuberculosis file and a pair of bathroom scales, also two desk lamps. This comprises the office equipment that is in use at the present time. All extra equipment and supplies will be found in neatly arranged cardboard boxes varying in size under the three tables.

All the agencies in the county have been most cordial and helpful in trying to get the Department started. The county nurse has been asked to speak to Home Demonstration Clubs, farm meetings, P.T.A. meetings and to make several radio talks.

The citizens of Lee County had been promised a county-wide X-ray survey by the Tuberculosis Seal Sale, but due to the demand throughout the State for X-ray clinics, they had been unable to have this service. Arrangements were made with Dr. Garvin to bring the X-ray trailer and equipment, belonging to the Orange-Person-Chatham District Health Department, to Lee County. Dr. Garvin made plans with Dr. Vestal from the State Board of Health to have Mrs. Margaret Parshall, Health Educator with his office, to help us organize and publicize our county-wide tuberculosis clinic which was to begin Monday, November 10, 1947 and to last for a period of six weeks, a week of this time being spent for retakes. 5,040 persons were X-rayed during this

campaign. This clinic was well publicized by newspaper articles and advertisement, as well as radio announcements and talks. Banners and posters were also used as publicity material. I was most gratified at the response given this campaign by the entire county. Clubs, business houses, city and county

officials all contributed of their time and effort in the publicity campaign. This publicity has made the people of Lee County aware of the fact that they have a Health Department and what they can expect from such an organization.

NURSING IN THE PROGRAM OF THE NORTH CAROLINA MEDICAL CARE COMMISSION

BY FLORA WAKEFIELD, R.N., MEMBER
North Carolina Medical Care Commission

THE Hospital Survey and Construction Act passed by the 79th Congress authorized grants to states, to assist in preliminary surveys of needs and the construction of hospitals and health centers. Through the Poe Commission appointed by Governor Broughton in 1944, and the North Carolina Medical Care Commission established by legislative act in 1945, a very thorough and comprehensive study was made of the hospital facilities and the health needs of the people of North Carolina. A State plan to meet these needs was prepared and presented to the Surgeon General for approval. The final objective of the plan is to provide for better distribution of hospital facilities, medical care and public health services for every citizen irrespective of race, creed or financial status.

Although very little has been said regarding the part nursing plays in such a broad program, there are implications relative to the care of patients that include nursing.

The Committee on Nursing Education and Service of the North Carolina Medical Commission recommended to the full Commission in October 1946 that a survey of nursing resources and nursing education be made in the state. Information from such a study would be very valuable in preparing a plan for meeting the demands for nursing services today and for preparing the nurses we will need in the future.

There is a greater demand today for nurses both professional and practical than ever before in the history of the world. Due to hospital insurance more people are using hospital facilities, and due to better financial conditions more people are able to purchase nursing services. Communities realize the need for public health nurses and are demanding their services.

Leaders in nursing education, administrators of nursing services in hospitals and public health agencies and private duty nurses are working together to provide for more and better nursing services for the citizens of North Carolina. They realize that good nursing care is essential to good medical care. In order to have good nursing care we must have capable and well prepared nurses. To have well prepared nurses, we need nursing schools equipped to give the young women who attend them sound basic courses in nursing.

Too long we have thought of the student nurse as a pair of hands and a pair of feet to get the job done, with less emphasis on the education offered the student nurse in her three years spent in the hospital. This is not the situation in all the schools of nursing in the state, nor is it peculiar to North Carolina. We have schools which give the nurse a sound basic course in nursing education including theory and practice. These schools have graduated

many of our best nurses.

North Carolina boasts of its State-supported educational program, of its colleges and universities. With the interest in the Health Program we have begun, North Carolina should be able

to boast of its schools of nursing. When this goal has been reached the problem of student nurse recruiting will be made easier and our schools will appeal to the type of young women we wish our future nurses to be.

MATERNITY INSTITUTE AT CHAPEL HILL

BY MABEL PATTON, R.N.
Public Health Nursing Consultant
State Board of Health, Raleigh, N. C.

AM sure that all of the nurses who attended the Maternity Institute at Chapel Hill in September which was conducted by Miss Anita M. Jones of the Maternity Center Association, New York City, will be delighted to hear from her. I believe the nurses were unanimous in their opinion that it was the best institute we have ever held on Maternity.

The following is an excerpt of a letter from her:

"I had a wonderful time planning to spend the very generous purse your nurses gave me. Each idea has been rejected as not enduring enough until I thought of trees. When I was in North Carolina Miss Blee and Miss Hay showed me their beautiful dogwood trees. I noticed that North Carolina boasted of its unusually beautiful dogwood trees. We have bought a number of pink and white dogwood and are going to place them below our ledge in front of our grove of Denver spruce and Frasier fir. I can picture two old ladies sitting comfortably in rocking chairs gazing out of a bay window some spring not so far distant and enjoying again the trip to North Caro-

lina. We have named our clump Carolina dogwood. They are a luxury that I could not have in the regular budget and we hope to enjoy them as long as we live. Perhaps the next time you come to New York City we can take you to Connecticut to see our nine acre plot even if the house has not yet been erected. Again I want to thank you and the nurses of North Carolina for your generosity and for the very happy week I spent with you."

In addressing the student body of Johns Hopkins University the president of that institution, Dr. Isia Bowman, said:

"Citizenship comes first today in our crowded world. No man can enjoy the privileges of education and, thereafter, with a clear conscience break his contract with society. To respect that contract is to be mature, to strengthen it is to be a good citizen; to do more than your share under it is to be noble."

In no field of effort is there so much promise and opportunity as in conserving the public health.

—Charles Evans Hughes

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

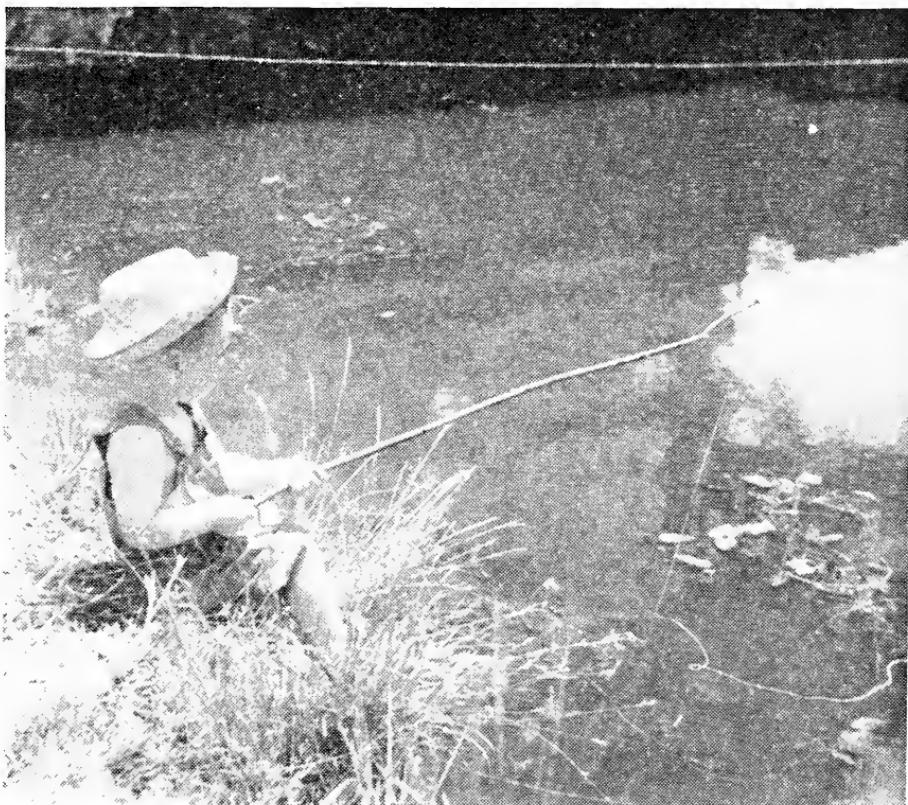
This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

APRIL, 1948

No. 4



Michael Canaday, Age 3, Son of Mr. and Mrs. C. C. Canaday, Jr.,
Benson, North Carolina

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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THE Health Bulletin



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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

RABBIT FEVER IN NORTH CAROLINA

WILLIAM A. WITHERS, M.D.

Raleigh, North Carolina

When a disease exists in our community and especially when the frequency of the disease is increasing all the time, it is certainly in the interest of all of us that we know something about the disease. And when the disease is one that can be successfully treated and effectively prevented by the careful observation of some simple precautions, then the spread of knowledge about it can be more than half of the battle.

Such a disease that is now present among us in an ever growing number of cases is Rabbit Fever. If you are one who does any hunting or fishing, or who follows any pursuit that occasions your spending time in the woods where you may come in contact with ticks, then this article is written especially for you because what you learn about Rabbit Fever and its methods of spread may well save you or your friends from becoming a needless victim of this disease.

About forty years ago, in Tulare County, California, a research minded physician by the name of Dr. McCoy was carrying out some rather extensive studies on plague. This disease, which is often referred to as "Black Death" was at that time very prevalent on the Pacific Coast. And during the course of these studies, as so often happens in the field of research, he discovered something he had not been looking for. He found a disease among ground squir-

rels which was characterized by lesions surprisingly similar to the lesions of plague. Following further bacteriological work in his laboratory, he very shortly isolated the causative organism. And in honor of the county in which he had made his discovery, he named the organism *Bacillus Tularensis*. Not long after that, Wherry established bacteriologically the first evidence of infection in a human being. Because of its discovery in California, and because the basic studies on it were done primarily in this country, Tularemia has been thought of as truly an American disease.

Tularemia did not long remain localized to the West Coast. About ten years later it was recognized in Utah in a patient who had been bitten several days previously by a deer-fly. Since then it has spread throughout the rest of the United States. Cases have also now been reported from Canada, Alaska, Japan, and Russia, and from other parts of the world. It is indeed a very potent factor in the destruction of wild animal populations, and more than ten thousand human cases have been reported from the United States.

Better known to patients as rabbit fever, or in the western states as deer-fly fever because of the usual manner of becoming infected, Tularemia has been found sporadically throughout North Carolina. It may occur during any season of the year, but is usually

more often prevalent during the summer months or during the hunting season. During the past few months, a number of cases have been found which originated in a community near Raleigh. It is perhaps a little more prevalent in some of the counties in the eastern part of North Carolina.

Because the organism is carried predominantly by wood ticks, and because of the obvious difficulties involved in public health measures aimed at wiping out the tick, it is reasonable to assume that in the future we will see an increasing number of cases of Tularemia. It is also, for the same reasons, logical to expect an increase in other diseases transmitted by the wood tick, such as, for example, Rocky Mountain Spotted Fever.

In a typical case of Tularemia, the history will reveal that the patient has recently been on a hunting trip, or that he has recently been cleaning a rabbit. He may in other cases remember pulling a tick off his body or crushing a tick or a fly between his fingers. More than ninety per cent of the cases can be traced directly to contact with an infected rabbit. Wood ticks, dog ticks, or animal bites will account for the majority of other cases, but the fact is that there are probably more than twenty different ways to become infected. It may be as early as two days or perhaps as long as ten days thereafter that symptoms of the disease will develop. In the most frequent type of case there is a very sudden onset of symptoms. Indeed the patient can usually tell you the exact hour in which he became sick. The sudden onset may consist of a severe shaking chill or an excruciating headache with persistent vomiting. He may soon notice generalized aching with high fever, sweats, and weakness. Any of his symptoms may predominate to a variable degree, and thus the acute onset may stimulate the onset of pneumonia, or of any of the other acute contagious diseases. Delirium and stupor may occur fairly early in the most severe cases. At the same time there may be a small papule

appearing at the sight of the bite or injury with enlargement of the regional lymph nodes which soon become very tender. After a few days or often as long as three or four weeks later these glands may suppurate but often they just remain hard and tender.

In addition to the typical onset of Tularemia just described, usually referred to as the ulcero-glandular type, there are other rarer types of onset. One of the more serious of these is the oculo-glandular type. Crushing of infected ticks or flies between the fingers causing blood to spurt into the eye may be responsible for these infections. Later the eye may become painful, swollen, and inflamed and ulcers may form in or about the eye. Recovery is the rule, but occasionally the infection is extensive and results in blindness. In this type as in the typical type of infection, the regional lymph glands also become painful and swollen and may suppurate.

In other cases no local lesion can be found, and they may closely resemble other diseases. In the pulmonary form of Tularemia, all of the signs and symptoms of pneumonia may prevail, or again the disease may closely simulate typhoid fever. Cases have been traced to the ingestion of sufficiently cooked wild rabbit meat, with vomiting, pain in the stomach, diarrhea, and fever. These cases may be accompanied by ulcers in the mouth with enlargement of the glands about the neck. Among the patients who have developed meningitis the death rate has been high, and about half of those developing infection in the lungs were fatal before the advent of streptomycin. Otherwise the disease would run its course in several weeks, and the patient would usually recover without complications. Cases that are not typical are often not diagnosed and usually it is because the disease has not been suspected.

Nowadays, however, with modern facilities available at the State Laboratory of Hygiene, it is possible for all doctors taking advantage of its facilities to establish a diagnosis beyond

question in suspected cases. And once the diagnosis has been made, it is possible now to treat it successfully. During the past few years, following the discovery of streptomycin, the death rate from Tularemia has been reduced considerably. One attack probably confers immunity for lifetime.

In spite of the successful methods of diagnosis and treatment now available, it is obviously much better not to contract the disease in the first place. For those who have occasion to come in contact frequently with rabbits or ticks, it is well for them to be especially careful in handling such animals. It is well for people in the first place to stay completely away from areas known to be infested with infected ticks. However when this is impractical, it is well for them to wear tick proof clothing. But even this does not give complete protection, and during the hot summer months it is entirely impractical. One of the habits of ticks is for them to crawl around on the body for several hours before they begin to feed. And it is believed that they usually feed for several hours before they are apt to cause an infection. For these two reasons it is possible to take reasonable precautions. Those who must be in the woods should carefully examine their body at least twice daily for ticks. All parts of the body must be carefully examined. Particular care should be paid to the hair in the pubic regions and in the armpits for these seem to be favorite feeding places for the ticks. The hair of the head should be examined with special care for here the ticks may be very difficult to find. Indeed those persons who have much occasion to be in the woods should keep their hair cut as short as is practical.

When on examination a tick is found, it is important to be unusually careful in removing it. The mouth parts of a feeding tick are imbedded rather tenaciously in the skin. It is not always easy to remove the tick without tearing the mouthparts from the body, but several methods may be tried. A drop of whiskey, or a drop of kerosene, or

even a drop of fluid from a cigarette lighter may stun the tick. After that he may release his hold and fall off. Or if he doesn't fall off it may be possible to loosen his hold with a knife or a toothpick. It is better still to remove him by gentle traction with a pair of forceps.

Here are some DON'TS. DON'T remove a tick with the bare hands. People have become infected from handling diseased ticks. DON'T crush the tick in order to kill it. It only takes a small splash of blood from an infected tick to be dangerous. Just a little of it in the eye may cause severe damage to the eye, and occasionally it may result in blindness. DON'T remove the body of a tick and leave the mouthparts imbedded in the skin. This may lead to a stubborn infection. After removal of the tick, the area should be thoroughly cleansed with alcohol and a dry dressing put in place.

And because the wild rabbit is so important in the transmission of Tularemia, it is well to observe certain precautions as far as they are concerned. It is of course prudent not to eat rabbits killed in areas whose tick population is known to harbor the disease. And even in handling wild rabbits it is wise to have the hands protected. While cleaning the rabbit, rubber gloves should be worn, and should be washed thoroughly before they are removed from the hands. And after the rabbit is cleaned all the leavings should be disposed of in such a way as to be protected from fleas and flies and other carriers of the disease. Meat that is prepared properly should be safe, but it should be cooked very thoroughly.

If these precautions are followed carefully by those most likely to contract Tularemia, then there should be many fewer cases and many fewer needless deaths.

Spontaneous combustion can start from oily rags used in cleaning the home, the National Safety Council says. Keep them in air-tight metal cans.

YOUR DOCTOR AND YOU

BY WILLIAM H. RICHARDSON

North Carolina State Board of Health
Raleigh, North Carolina

The general subject assigned to the State Board of Health's weekly radio program is "Your Health and You." You hear the term every Saturday morning and you read it in the announcements of station WPTF's Saturday schedule.

The subject of this discussion is "Your Doctor and You."

Governor Cherry prefaced a recent article in the North Carolina Medical Journal, on "The Public and the Medical Profession," with these words, and I quote:

"With the possible exception of the Christian ministry, there is not, I think, a higher calling among men than that of the medical doctor. The clergyman is supposed to diagnose and prescribe for ailments of the soul, and the one who cannot do just that should take stock of himself. The medical doctor diagnoses and prescribes for bodily ills. Together, the minister and the doctor exercise a definite custodial care over humanity from the cradle to the grave, each helping to bring the individual into a more abundant life—here and hereafter." (End quote)

As important as that is, we shall not discuss the relation between the clergyman and his parishoner. Religion is something to be taken care of in the home, the church, and the church school. Health, on the other hand, is a matter of public concern, in that disease cuts across our entire pattern of life, without regard to race, religion, or economic status.

In the preservation of health, all citizens have a common objective, because what affects one may affect all, especially as to contagious, or communicable, diseases.

Medicine, as many of you already know, is generally divided into two broad classes—namely, curative and preventive. Public health is concerned

chiefly with preventive medicine, including mass protection—and an incapable duty toward the indigent, the underprivileged, and the otherwise unfortunate. The idea of mass protection entered into the picture when public health first came into being. We know that this was true as to North Carolina, where the State Board of Health is the child of the medical profession, it having, at first, been the **State Medical Society itself**. Later, however, a separate organization was set up, in order that public health might be administered by those whose time was not taken up with private practice. But, at that, the Board is made up of members of the State Medical Society and certain others appointed by the Governor. Every year, there is held what is known as a conjoint session of the State Board of Health and the State Medical Society, when the former gives an annual accounting of its stewardship.

So much for the broad picture. You have heard about health officers and their various duties—how they work to protect you against communicable diseases, and how they minister to the needs of the indigent and the underprivileged. But, in order to develop a well-rounded conception of what the medical profession means to the general population, let us consider briefly the vitally important role the private practitioner plays in saving human life.

How many of you know just what it takes for a young man—or woman—to become a qualified, competent medical doctor? In the commercial world, you often hear it said of one that he is a "self made man." This usually implies that the man in question lifted himself by his own bootstraps, so to speak; that he came up the hard way, by having contested every inch of ground over which he passed, on his way to success.

Did you ever stop to think how many really great medical doctors and surgeons started out with not a cent in this world—and how, because of a grim determination to be of service to humanity, they fought and worked their way through college and medical school, perhaps with an enormous debt hanging over them on graduation and registration? There are many such, and the chances are you know some of them. Then, there are those whose education was due to the sacrifices made back home by hard working fathers and mothers, who denied themselves the necessities of life, that the boy might go on through school and, some day, be a big doctor. Usually, such beneficiaries of parental sacrifice **do become** useful doctors, because they take with them into the practice of their profession that same indomitable spirit that marked their progress through medical school.

Do you know how long it takes a young man—or woman—to prepare for the ministry of medicine? A minimum of seven and a half years, and an average of ten years—perhaps longer, if he or she later specializes in the treatment of certain diseases.

And so, your family doctor, no matter by what route he passed to qualification, represents both monetary investment and hard work. There were no short cuts open to him. Medical doctors can't take short cuts to success. And so, the doctor, even as the commercial business man, has something for which he paid and paid dearly, and he is entitled to a fair return on his investment.

Just what does your family doctor mean to you? Has there developed between you and your doctor a spirit of confidence and mutual understanding, such as that which existed between your grandfather and the old doctor that used to drive up to his gate, or up the lane to his farm house, in a buggy, tie his horse, and go into a home whose problems he knew and understood?

Do you seek the services of your doctor only when you think you are

seriously ill and expect him to cure you, as if by magic? Or do you make regular contacts with him and let him check you over as a precaution against diseases which might overtake you, if you do not conform to the proper standards of living? If you are in middle or late life, do you consult your family physician for those danger signals which sometimes precede an attack by one of what we know as the degenerative diseases, against which no means of immunization have, as yet, been discovered? You ought to do just that. Now, this is no plug for doctors. They all have about as much as they can do, keeping daily office hours, visiting patients in homes and hospitals and various and sundry other things they are obliged to do. But it is a suggestion, and a very serious one, that you develop a relationship with your family physician that will keep him apprised of your physical condition, in order that he may prescribe measures which might mean the prolongation of your life, or the restoration of your apparently wan- ing health, especially in middle or late life.

There was an intimacy between the average family and its physician, in bygone days, that has never been surpassed, not even in the church itself. As for that matter, most doctors are church men—many of them deacons, vestrymen, stewards and elders. They have more than a passing interest in your well-being. The tear they shed at the death of one of your loved ones is not a professional, but a sympathetic, tear. If you didn't have a cent in this world, the chances are that your family physician would keep right on treating you, with as much interest and efficiency as if you were a millionaire. So don't get the idea that he is just a commercialized business man. He isn't, if he is the right kind of a doctor.

Avail yourself of all the advantages of public health, and they are many, paid for out of public funds, one way or the other; at the same time, establish relations with your family physician that will enable him to help you keep

your physical body in repair and, perhaps, make it possible for you to spend many more years with your family and friends. If you are unable to buy the services you need, your family physician will refer you to public health, in some

cases, just as public health refers you to your family physician, when you are in need of services for which you are able to pay and ought not to have for nothing, at the expense of those who can't pay.

IMMUNIZATION POLICY of the NORTH CAROLINA STATE BOARD OF HEALTH

On February 24, 1948, the State Board of Health adopted a Communicable Disease Control Guide included in which were recommendations regarding immunizations. These recommendations follow.

Diphtheria

1. Immunize all children between six and nine months of age with alum precipitated diphtheria toxoid, either plain or in combination with pertussis vaccine and tetanus toxoid.

2. Reimmunize all children at twelve months and five years.

3. Schick test adults and children over six years who have not been previously immunized. If positive, the individual should be immunized with diphtheria toxoid-Ramon after a skin test to rule out sensitivity.

4. When administering alum precipitated toxoid, be certain that there is none of the fluid on the outside of the needle. If this precaution is not taken, sterile abscesses are more likely to occur. Either the needle should be wiped carefully after the air has been expelled from the syringe or a new needle should be used.

5. Inject the material subcutaneously, not intramuscularly or intradermally. Make sure that none of the toxoid is expelled from the needle as it is withdrawn. The site of choice for the injection is the deltoid region.

6. For the first immunization in children under six years of age two doses of one cc. each should be given one month apart unless the manufacturer indicates otherwise.

7. For booster doses or reimmunization, one dose of one cc. of alum precipitated toxoid should be given unless the manufacturer indicates otherwise. Diphtheria toxoid combined with pertussis vaccine and tetanus toxoid can be given in the dosage recommended by the manufacturer to reimmunize children who had previously received the combined inoculation.

8. In Schick-positive adults and children over six years of age the dosage will depend on the result of the skin test for sensitivity. To carry out this test, inject 0.1 cc. of a 1:100 dilution of diphtheria toxoid-Ramon. This is known as the Maloney test and is read in twenty-four hours. If a two-plus or three-plus reaction occurs, give small divided doses. In case of a four-plus reaction, desensitization can be attempted with weekly injections of a 1:1000 dilution of the Ramon toxoid or preferably toxin-antitoxin in goat serum can be used for the immunization. A serum skin sensitivity test should also be done before the latter is administered.

Measles

1. Administer immune globulin for modification in all children who are four years of age or younger.

2. Administer the material intramuscularly, preferably in the gluteal region. After the needle has been inserted, suction should be applied by pulling out the plunger slightly to see if blood is drawn into the syringe. If blood is obtained, withdraw the needle and try a new location.

3. Immune globulin given immediately after exposure will usually prevent the disease. If given on the fifth day after exposure in most cases a modified attack of measles will follow. The physician should decide which procedure is indicated in each particular case.

4. Immunity provided by the injection disappears after approximately four weeks. Another dose of immune globulin would be indicated if the exposure is repeated.

5. The dosage will depend on the product used and the manufacturer's instructions as to dosage should be followed.

Rocky Mountain Spotted Fever

1. Immunize persons frequently in contact wooded areas where the disease is known to be prevalent.

2. Reimmunize selected persons annually.

3. The material usually used at present is that prepared from chick embryo cultures according to the method of Cox. Tick tissues vaccine is also available. When using chick embryo vaccine, each individual should be questioned regarding egg sensitivity or preferably, a skin test with 0.1 cc. of 1-100 solution of the vaccine should be done. If a negative reaction after fifteen minutes is obtained with the skin test, the chick embryo vaccine can be used. If a positive test is obtained or if there is a history of egg sensitivity, the tick vaccine should be used.

4. Inject the vaccine subcutaneously in the deltoid region.

5. Children over ten years of age and adults should receive two injections of 2 cc. each or three injections of 1 cc. each at weekly intervals. Children under ten years of age should receive one-half of this dosage.

6. The immunity produced lasts approximately one year so that repeated annual injections are necessary for sustained protection.

7. The optimum time for administering the vaccine is February or March since the seasonal incidence of the disease is between April and November.

Smallpox

1. Vaccinate all children preferably before the age of one year.

2. Revaccinate children and adults every three years.

3. The site of choice for vaccination is the deltoid region. Use the left arm for right-handed persons and the right arm for left-handed persons.

4. Do not apply a chemical disinfectant such as iodine. Use only alcohol or acetone and be sure it has completely evaporated before vaccination is attempted.

5. The scratch method is recommended. A superficial scratch about one-fourth inch long is made at the desired location. It should not be deep enough to draw blood. A drop of vaccine is applied to the scratch and is allowed to dry.

6. Do not use shields. A clean gauze dressing that is changed daily may be applied if necessary.

Typhoid and Paratyphoid Fever

1. Immunize children as soon as sterilized feeding have been discontinued, and adults.

2. Reimmunize annually.

3. Inject the material subcutaneously in the deltoid region.

4. "Triple vaccine" containing paratyphoid A and B, as well as typhoid heat-killed organisms, should be used. Three doses at weekly intervals are given. A suggested dosage schedule is as follows: **Under 2:** 0.1 cc., 0.2 cc., 0.2 cc.; **2 to 4:** 0.2 cc., 0.4 cc., 0.4 cc.; **5 to 7:** 0.3 cc., 0.6 cc., 0.6 cc., **8 to 12:** 0.4 cc., 0.8 cc., 0.8 cc.; **over 12:** 0.5 cc., 1.0 cc., 1.0 cc.

5. Persons who have been immunized should receive an annual dose of 0.1 cc. of the vaccine intradermally or 0.5 cc. subcutaneously in order to maintain an adequate level of immunity.

6. Persons who do not receive an annual booster dose should be reimmunized every three years by three subcutaneous injections, the same as with the initial immunization.

Whooping Cough

1. Immunize all children preferably before the age of three months.

2. Reimmunize all children at six months, one year, and five years with pertussis vaccine combine with alum precipitated diphtheria toxoid and tetanus toxoid.

3. Inject the material subcutaneously in the detoid region. If weekly doses of plain vaccine are given during early infancy, the injection can be divided

and given in both arms.

4. The dosage varies with the products used. Plain or alum precipitated pertussis vaccine alone should be used if the child is under six months of age. At six months and up to six years the combine alum precipitated diphtheria toxiod, tetanus toxoid, and pertussis vaccine may be used.

PATIENT'S PERSONALITY OFTEN DECISIVE IN TUBERCULOSIS CURE

Recovery Facilitated When Tuberculous Patients Get Psychologic Help From Time of Diagnosis To Discharge

"The personality of the tuberculous patient is the controlling factor in his cure," say three writers in the November 15 issue of **The Journal of the American Medical Association**. Because of this, they state, "psychiatric insight is not an occasional need but . . . is of continuous importance in any program of comprehensive care in tuberculosis." And restoration of the patient to his fullest possible usefulness in society is a process which should begin at the time of diagnosis.

The writers are Jules V. Coleman, M.D., of the National Jewish Hospital at Denver, Allan Hurst, M.D., of the Colorado Psychopathic Hospital and Ruth Hornbein, M.S.S., of the Departments of Medicine and Psychiatry of the University of Colorado School of Medicine. They assert that workers in the fields of social service, occupational therapy, vocational counseling and psychology are all needed in a comprehensive program of medical care for the tuberculous. Such a program should include: "(1) orientation of the patient to his illness; (2) evaluation of organic and psychologic factors and their interaction; (3) a plan of treatment to include organic and psychosocial factors, and (4) a phase of social readaptation, with regard for psychosocial as well as organic limitations."

"In a chronic, recrudescent disease

such as tuberculosis," they write, "it is especially important to be aware of the patient's attitudes and conflicts and to understand that his emotional reactions to the illness, his acceptance or rejection of the disease and his fears and misapprehensions may all play a decisive role in modifying his physical course and prognosis."

Psychiatric problems arise in relation "to every phase of the care and management of the tuberculous patient, from the time of diagnosis to his return to the community as a person with arrested tuberculosis," the article states. In an attempt to defend himself against acceptance of the disease a patient may refuse to take the illness seriously, or may develop feelings of guilt or rebellion about the dependency which "curing" necessitates. He may feel that the period of hospitalization is the equivalent of a prison sentence, or may have other unrealistic notions about the kind of environment which he is about to enter and the length of time he will have to spend there. He may not really accept the necessity for making sacrifices in order to get well. Furthermore, "there are, almost invariably, objective problems which must be met, financial insecurity, care of children and other areas of social and economic planning."

"In the entire treatment of tuberculosis, bed rest still remains the cornerstone," the writers also observe. "There is little doubt that such enforced inactivity tends to intensify preexisting

emotional problems. The patient's apprehensiveness and tension while on bed rest may produce physiologic changes, such as tachycardia and over breathing, equal to the moderate activity of the man who is up and about."

Fear when the subject of surgery is brached "may be so great that the patient decides to refuse collapse therapy and to depend on his own 'healing powers.'" the article continues. "We have observed that recovery is facilitated when patients get psychologic help in preparation for surgical treatment."

The writers point out that other types of fear arise when the patient is considered ready for building up to discharge, and activities of a provo-

cational and vocational nature are begun. Some fear reactivation of the disease so much that they develop all sorts of somatic complaints in order to return to bed; others try to do far more than they should in an attempt to reassure themselves about their strength.

Even more paradoxical emotions are stirred up by leaving the hospital. "On the one hand there is a desire to renew independence, but on the other, a reluctance to give up the protection so freely offered during illness. . . . As significant a role as the patient may have had at home, new patterns are often set up during his separation. The family must be helped to make a place for the returning patient."

REVISION OF THE COMMUNICABLE DISEASE REGULATIONS

On December 14, 1944, the State Board of Health adopted a complete revision of the Communicable Disease Regulation. Since that date four additional minor changes have been made. In order that these later revisions may have the full effect of law, it is required that they be published in the Health Bulletin. They are herewith presented.

On December 5, 1945, Regulation 45, pertaining to scarlet fever, was revised by changing the wording in the third paragraph of Section K to read: "Susceptible contacts of any age who are not residing on or have moved away from the premises where the disease exists shall not attend or be employed in any such school until seven days after their last exposure and a written permit has been obtained from the local health quarantine officer."

On May 14, 1947, Regulation 34, pertaining to meningococcus meningitis, was revised by rewriting Section H to read: "Contacts shall be quarantined for fourteen days from the last exposure or until prophylactic treatment has been given unless a written permit is obtained for the local health or quaran-

tine officer."

On May 14, 1947, Regulation 58, pertaining to whooping cough, was revised by adding the following sentence to Section E: "The immunization of children against whooping cough before the age of one year is required by Section 130-190.1 of the General Statutes of North Carolina."

On November 13, 1947, the following paragraph was added to Section P or Regulation 32, pertaining to malaria: "9. It shall be the duty of all local health officers to enforce the provisions of this regulation. Authorized representatives of the North Carolina State Board of Health and local health departments shall have authority at all times to enter, for the purpose of inspection, the premises upon which water has been impounded or upon which it is proposed to impound water. Any person who shall hinder or prevent any authorized representative of the North Carolina State Board of Health or a local health department in the performance of his duty in connection with this regulation shall be guilty of a violation thereof."

IDELL BUCHAN MEMORIAL LOAN FUND

At the annual meeting of the North Carolina Health Association which convened in Charlotte, November 1947, the members of the Public Health Nurses Section voted unanimously to raise and perpetuate a loan fund in honor of Miss Idell Buchan who died June 7, 1947. A committee was appointed to make plans for this memorial.

Miss Buchan was known and respected throughout the length and breadth of North Carolina, and was beloved by a host of friends of all ages and walks of life. She served as a Public Health Nurse in North Carolina for a total of twenty-eight years, having worked for the State Board of Health from 1919 to 1928; the Currituck County Board of Education from 1928 to 1937; the State Board of Health from 1938 to 1941; Works Progress Administration from 1941 to 1943; and as a Consultant Public Health Nurse for the State Board of Health from 1943 until her death.

The loan fund committee plans to

raise a fund of \$500 (time limit one year); to send letters to Public Health Nurses over the State; to give other nurses and friends the privilege of contributing to the memorial fund if they care to do so; to publicize the plan through articles in the North Carolina State Board of Health Bulletin and the Tar Heel Nurse.

The funds will be kept at Chapel Hill for the benefit of public health nurse students from North Carolina. No funds will be personally solicited for this fund, but to friends of Miss Buchan who knew of her untiring efforts to promote good health for the citizens of the State and her interest in better education and preparation for young nurses we offer the privilege of contributing.

Contributions should be sent to Miss Margaret Blee, School of Public Health University of North Carolina, Chapel Hill, North Carolina.

Louise P. East, Chairman
Margaret Blee
Flora Wakefield

BIG, BRAWNY MUSCLES NO TRUE INDICATION OF PHYSICAL FITNESS, COMMITTEE REPORTS

Big brawny muscles—the kind that athletes often display in competitive sports—are no true indication of physical fitness, according to a report of the subcommittee of the Baruch Committee on Physical Medicine which appears in the March 13 issue of *The Journal of the American Medical Association*.

"A clear definition of the term physical fitness is elusive," says the committee, which is composed of Drs. Robert C. Darling, Ludwig W. Eichna and Harold G. Wolff, of New York, and Clark W. Heath, of Cambridge.

"The purely physical requirements of various tasks, whether they be jobs or physical feats, are too varied to be determinable by any one set of crit-

eria," the committee's report says, adding:

"Many instances can be cited in the army and in civilian life of persons well endowed physically who could not carry on practical task because of the emotional and psychologic elements involved."

The article pointed to the many persons with poor physical equipment and even defect who, judged by accomplishment, are fit to carry on their jobs. "The only final test of fitness," the report says, "seems to be the ability to perform the task desired without undue fatigue or exhaustion."

The committee explained that it was difficult to set up universal standards

of fitness because of "the large number of persons with physical defects who cannot be judged by fixed standards but who, we know, can often carry on an active and useful life," and thereby be considered fit.

"The purpose of the usual medical examination is to discover organic physical defects," the report says. "It is highly desirable, however, to extend the scope of the physical examination. In relationship to fitness it is necessary not merely to discover defects but to consider the potential performance of the patient in spite of his defects. For example, defective sight or hearing, especially if helped by glasses or hearing aids, may be no handicap to daily life. Good insight and strong motivation on the part of the patient can overcome even severe handicaps. In general one may say that organic disease and abnormalities affect fitness only when they reduce physical and mental activity below that necessary for the effective carrying on of the patient's job."

The committee concluded that the

routine medical history and physical examination can and should do more than assess physical defects.

The report says in part:

"The physical equipment of the patient and his physiologic response to stress are only a partial though necessary component of fitness. The final test is how he uses his equipment in his play and work . . . Moreover, he should be able to perform the tasks repeatedly without fatigue and have in addition a reserve to meet and sustain unexpected stresses, should they arise, without being incapacitated by them. A physically-fit person will be able to meet these requirements and still maintain a sense of well-being. This picture of functional health is certainly an adequate goal. Actually there are no satisfactory data to predict that the physically fit subject will have a longer life span, a lower incidence of degenerative disease or a greater resistance to infection than his unfit confrere.

PRECAUTIONARY MEASURES SET UP FOR EPIDEMICS OF RINGWORM OF SCALP

Public health measures designed to prevent another epidemic of ringworm of the scalp among children have been drawn up by a group of New York skin specialists, according to an article appearing in the current issue of the Archives of Dermatology and Syphilology, published by the American Medical Association.

Ringworm of the scalp, which was one of the physician's main problems during the war years, is a fungous growth. It develops one or more circular patches of redness and crust formation. The hairs in the affected region become loose and break off just above the skin surface, leaving short stumps.

The main reason for its spread is attributed by the authors, Drs. Frank C. Combes and Howard T. Behrman,

New York, to lack of parental observation and control, and cleanliness.

"It is a great tribute to American medicine," the doctors write, "that recognition of the severity, contagion and extent of the disease brought forth speedy measures of isolation, control and treatment. Treatment centers were established in strategic areas throughout the country.

"Various new drugs have been employed with success in certain types of ringworm of the scalp, but the major weapon of control in the so-called 'human' type is x-ray treatment.

"In a certain percentage of cases, reinfection (from contaminated hats, articles of clothing, other children or infected members of the same family) may occur. Following x-ray treatment

all infected articles of clothing should be burned."

The New York skin specialists have outlined the following set of measures designed to control subsequent epidemics of ringworm of the scalp:

1. Ringworm of the scalp should be made a reportable disease.
2. The public should be reached through the press, pamphlets and radio.
3. It is recommended that city-wide, complete and periodic inspection of children who are in institutions be made by qualified physicians.
4. Barbers should be told about epidemics and cautioned to be on the lookout for sores on the scalp.
5. Children should wear hats as a precaution against infection in public places.
6. Clipping and shaving of the hair prior to x-ray treatment should be done in the clinic at which infected children are treated. The parents should be warned not to take an infected child to a barber.
7. The department of health should register equipped clinics and qualified physicians for the treatment of ringworm of the scalp.
8. It is recommended that no child be permitted to return to school until he is entirely free from infection.



Mary Grace Thorne, age 4½, daughter of Mr. and Mrs. R. Doane Thorne, Route 3, Elm City, N. C. Immunization and health guidance helped her.

SKIN ERUPTIONS OFTEN DEVELOP FROM DRUG APPLICATIONS

Skin eruptions are often caused by drugs used to correct an existing disorder, according to an article by Lester Hollander, M.D., Pittsburgh, in the current issue of *HYGEIA*, the health magazine of the American Medical Association.

"It is common knowledge among skin specialists," Dr. Hollander asserts, "that both externally applied and internally administered drugs can cause a great variety of skin eruptions.

"Since the actual cause of an eruption is increasingly more difficult to identify as its duration lengthens, and

since certain eruptions may precipitate chronic organic damage, physicians have to be on the alert for them. However, most of the annoying skin eruptions of this class are not caused by professionally prescribed medication. The source of blistery eruption of the hands and feet or a diabolic nocturnal itch often found in the consumption of proprietary (patent) medicines."

Cold remedies, headache cure-alls and cathartics are among the most common remedies causing skin disorders, the doctor states.

"The kingpin among the many-pur-

posed vitamin B complex groups, thiamine chloride or B1, not infrequently causes a skin eruption. At times the benefits of vitamin B are nullified by the inconvenience, insomnia and nervousness caused by the vitamin itch.

"You can accept it as axiomatic," the article continues, "that any skin disease or eruption which becomes increasingly

annoying after the use of a local application is being irritated and not helped by it—even if its 'purity' and 'non-irritating' qualities are certified by movie stars, golf professionals or any such disinterested, self-sacrificing people. Of all these nostrums the so-called athlete's foot remedies are the most noxious."

CANCER DEATH TOTALS INCREASE IN AGING, GROWING POPULATION

Earliest Diagnosis, Treatment Possible By Present Methods Would Still Fail To Reduce Total Deaths

Because our population is not only increasing but growing older in 1980 there will be approximately 82 per cent more deaths from cancer than in 1940 if no further progress is made in cancer control in the United States.

This starting fact is brought out by Halbert L. Dunn, M.D., Chief of the National Office of Vital Statistics of the United States Public Health Service of the Federal Security Agency, in an article published in the current issue of *Hygeia*, health magazine of the American Medical Association. So that "we may have a realistic yardstick for the progress made in our fight against cancer," Dr. Dunn sets forth some estimates based on population trends and on cancer surveys made by the United States Public Health Service:

Year	Total		Cancer Deaths
	Population	Cancer Cases	
1940	35,104,000	287,735	158,335
1950	41,859,000	347,400	192,300
1960	48,654,000	404,300	226,700
1970	55,450,000	456,600	260,000
1980	58,731,000	500,000	288,500

"If, in 1980, there should actually be only 400,000 cancer cases and 230,000 cancer deaths, it would represent a saving of one out of every five cases or deaths that could have been expected—this in spite of the fact that both of these

figures are considerably larger than today's," the writer observes.

Conveniently located cancer clinics—one for every 50,000 persons—are today advocated by cancer authorities in order to assure earlier diagnosis and treatment. In 1945 New Hampshire was apparently the only state which had achieved that goal, and five states had not a single cancer clinic available.

And yet, Dr. Dunn points out, even an infinite number of cancer clinics using the best methods of diagnosis and treatment known to science today could not actually reduce the total number of cancer deaths expected with our aging and growing population.

"The real victory in the cancer battle will probably come from a vast research program aimed at the nature of cancer itself," he writes. "This calls for large sums of money, and for thousands of research brains. It took two billion dollars and thousands upon thousands of scientists and technicians working in a coordinated program of research to make the first atom bomb. The same amount of money and brains devoted to the subject of cancer might bring a solution of this baffling problem in about the same length of time."

"Quite likely, the cost and effort would not be this great. But if it were—is this too much to pay to keep the cancer spark from kindling?"

Pedestrians: To stay in the pink, watch the red and green.

HEALTH IS EDUCATION'S FIRST OBJECTIVE, CONFERENCE AGREES

More Than 100 Educators And Doctors Meet To Discuss Cooperation of Physician In School Health Program

Health is the primary objective of modern education, a three-day Conference on the Cooperation of the Physician in the School Health and Physical Education Program, sponsored by the American Medical Association.

More than 100 representatives from four different agencies—state departments of education, state departments of health, state education associations and state medical societies and associations met at the Hotel Moraine in Highland Park, Illinois. Chairmen and summarizers of the discussions within the various sections were:

School health services: Chairman, Charles C. Wilson, M.D., New Haven, Conn., Professor of Public Health and Education at Yale University; Summarizer, C. Morley Sellery, M.D., Director of Health Services for the Los Angeles Public Schools.

School health programs and studies: Chairman, Warren H. Southworth, Dr. P.H., Associate Professor of Education at the University of Wisconsin, Madison; Summarizer, Clair E. Turner, Dr. P.H., National Foundation of Infantile Paralysis, New York City.

The physician and physical education: Chairman, Benn Miller, Ph.D., of the American Association for Health, Physical Education and Recreation, Washington, D. C.; Summarizer, William L. Hughes, Ph.D., of Temple University, Philadelphia.

Pre-service and in-service education: Chairman, Ruth Boynton, M.D., Director of the Student Health Service and Professor of Public Health at the University of Minnesota, Minneapolis; Summarizer, Cyrus H. Maxwell, M.D., of the New York State Department of Health at Albany.

The conference advocated that every school establish workable policies to

assure its pupils of healthful school living conditions, appropriate health and safety instruction, adequate or superior education and, especially, teachers and other school personnel with up-to-date preparation in health knowledge.

The leaders agreed that schools alone cannot enable children to attain the desirable goals of individual and community health: parents have the primary responsibility. Physicians, dentist, nurses, health officers, social and welfare workers and their official organizations, such as medical, dental and nursing societies: health departments: voluntary health agencies and social agencies are all rightfully concerned with health activities in their communities. School health policies must be formulated to achieve the maximum cooperation and coordination both within each school and each school system and between each school and the community.

"A scientific attitude toward health," said W. W. Bauer, M.D., Director of the Bureau of Health Education of the American Medical Association, "can break down superstitions and fads and thereby help pupils to analyze critically advertising and propaganda which may be misleading."

E. E. Vincent Askey, M.D., Los Angeles, president-elect of the California Medical Association, told the conference that children should also be taught "that sickness, accidents and disability are not an abnormal expectancy in life."

The accident death toll in the U.S. last year was 100,000 lives, a 2 per cent increase over 1946. Home deaths led the list of causes, and the traffic death toll was the only one to show a reduction from 1946.

—o—

Many a tombstone is carved by chisel—

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The
Health Bulletin
Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

MAY, 1948

No. 5



JOHN HAMILTON HICKS

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
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Don't Spit Placards	Pediculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

VENEREAL DISEASE REVIEW OF NORTH CAROLINA

By

CARL V. REYNOLDS, M. D.

Secretary and State Health Officer

I HAVE been given the task of reviewing venereal diseases, with special attention to North Carolina's past and present course of procedure, and accomplishments. This is a large order and it will be bringing "coals to Newcastle" to this assembled group.

I will begin by saying that the spirochaete and the gonococci have given us a hectic chase over a rugged and rocky course. History teaches us, and all of us remember, that Columbus discovered America in 1492. But, few of us know that, in discovering America, Columbus visited Haiti and while there he and members of his crew acquired syphilis, and in 1493 they carried the disease to Spain, and from there it spread throughout Western Europe and back to America—arriving in Boston in 1646.

Since 1493, we have walked in a growing shadow of death caused by a most devastating, insidious disease of unknown cause and questionable origin, until it had stretched out its tentacles to encompass 12,700,000 of our people. It was not until 1905, when Schaudinn and Hoffman discovered the spirochaete pallida; 1907, when Wassermann discovered the Wassermann test; and in 1910 Ehrlich discovered the specific that has caused us to turn to science to exchange this shadow of death for a ray of hope.

In retrospect, little was accomplished in the time when the iodides and mercury were the principal therapeutic agents, either in the permanent cure, control or incidence. It might be called the period of symptom control and disease extension. In this period (previous to 1910) the disease carrier was a dark inviolate closeted secret and his all too frequent medical (?) advisor was his closest friend or some drug clerk.

It was not until Surgeon General Thomas Parran took his courageous and determined stand to expose the tabooed, closeted secret to that of the fireside discussion, that this devastating menace to society was handled as an infectious, reportable, and curable disease, and to him the nation shall forever feel a deep sense of gratitude.

Almost simultaneously with Parran's educational opportunity, by means of the radio, press, and free-speech; and with the knowledge that there was a known cause of syphilis and gonorrhea; and that they were controllable, the Trustees of the Zachary Smith Reynolds Foundation seized the challenge and generously financed (December 1, 1937) a control and treatment program, which supplemented by an equal amount, (\$100,000) by fourteen counties, stimulated the establishment of what we thought was an adequate program to cover one-third of the popula-

tion of the State. This stimulus placed North Carolina's program in the forefront.

Following closely, the LaFollette-Bulwinkle Bill was passed, securing Federal funds with which we could cover our entire population and add interest and momentum to this great undertaking. With this announcement, we gained the enthusiastic interest and support of our county and city health officers and their staffs, and established subsidized clinics covering the entire State.

With this knowledge at hand we remained mindful of the importance of ethical cooperation and proper relationship with the medical profession. This we have adhered to, and, to succeed, we should have better and more active cooperation of the medical profession, officials, laity and welfare associations. We know of no disease more prevalent, more harmful and causes more cripples.

With this information, we knew the problem and got busy with the following results:

There was no real progress made in the control of the venereal diseases until its prevalence, its causes and effects, were brought out into the open. This intensified emphasis began in 1937, when the press and radio, with the help of the medical, political, social, and religious professions began the drive towards eradicating syphilis and gonorrhea. Evidence of this campaign is shown in the table below:

Syphilis Cases Reported to State Board of Health, 1919-1947

Year	Number	Year	Number
1919	2,084	1933	4,570
1920	2,213	1934	5,201
1921	2,637	1935	5,189
1922	4,671	1936	6,086
1923	3,559	1937	12,299
1924	3,153	1938	20,714
1925	3,161	1939*	30,985
1926	3,044	1940	21,225
1927	3,224	1941	18,627
1928	2,846	1942	16,695
1929	4,457	1943	13,709
1930	5,106	1944	9,823

1931	5,144	1945	8,212
1932	4,365	1946	9,261
		1947	8,760

*All Time High

Until that year (1937), 6,000 cases comprised the largest number ever reported. This previous high number was doubled in 1937, more than tripled in 1938, and then in the year of 1939, we received reports in the State Board of Health totaling 30,985 cases, the all time high.

What was the cause back of this sudden rise? Certainly, it was not due to more syphilis being contracted in the years 1937 through 1939.

In 1937, the educational campaign against syphilis had attained a high degree of effectiveness. The amount of syphilis and gonorrhea that existed in the State—one of the most reliable sources estimated there were 385,000 cases of syphilis, 500,000 cases of gonorrhea—resulted in concerted action being taken by private and public interests to do something about these diseases that only were prevalent in the "lowest classes of the population." This activity was in a large part responsible for an expansion of the public health service in the various counties. In the year 1937 only 54 counties and 4 cities had full-time service. By 1940 there were 82 full-time health departments. There are now 96 counties and five cities with full time health departments.

In May 1937, a plan was worked out for the control of syphilis. It was endorsed by organized medicine. During this same month, a new modern building for the State Laboratory of Hygiene was authorized and work began in December.

The need for this new building was evidenced by the fact that 202,000 blood tests were done that year for syphilis—65,000 more than the previous year. The next two years experienced even greater increases as 305,000 and 371,000 blood tests were done by the old laboratory in 1938 and 1939 respectively, from July 1, 1941 to July 1, 1947 2,708,948 and in addition Selective Service 552,714 making a grand total of 4,139,662.

The State Legislature appropriated \$25,000.00 to the control of Venereal Disease. This was a shameful gesture; however, the significant fact was that our State government suddenly began to realize the growing importance of syphilis from the standpoint of discovery and cure.

Medical specialists in the venereal diseases were brought in from the United States Public Health Service. Local health departments became Venereal Disease conscious and secured appropriations from their local commissions to fight these diseases.

As the local health departments were organized in the battle against venereal diseases, naturally more cases of syphilis and gonorrhea were discovered. In 1940, of the 21,225 cases of syphilis reported, 87.7 per cent were in the non-infectious stage. This indicated to us that a tremendous backlog of latent syphilis had gone undiagnosed and that without sufficient funds the goal of eradicating syphilis was impossible. For example, in 1940, of the 21,225 cases of syphilis reported, only 12.3 per cent were in the primary and secondary stages. Whereas in 1947 46.5 per cent of the 8,760 were in these most infectious stages.

It is interesting to review briefly the changes that have taken place in the finding and treating of venereal diseases since 1940, the year when the statistics were expanded to the extent that numerous analyses could be made.

Until the latter part of 1943, when the two Rapid Treatment Centers were established, the health department clinics did most of the treating of syphilis. In those days, if a patient attended the clinic regularly, it took him seventy weeks to receive adequate treatment for syphilis—30 Arsenicals and 40 Heavy Metals.

Today at either center a patient receives maximum therapy in eleven days on the average. You can fairly well guess how many people who had syphilis attended the clinic each week for practically eighteen months. Records show that back in 1940, there were on

the average 34,000 cases active each month but that about 8,000 cases would go for a month at a time without any treatment. The average amount of treatment that each patient received was less than two and one-half injections per month. In 1940 it took two years or more to give a patient with early infectious syphilis 20 or more arsenical injections and 20 or more heavy metal injections; and then, only eighty-two per cent of these cases received this much—poor therapeutics!! Today a higher per cent of early cases receive adequate treatment in eleven days.

The patient load has changed tremendously since 1940. The clinics had 4½ times as many patients to treat then as they do now. Then, the clinics were usually spoken of as "pumping stations"; today the health departments can and should spend most of their time in finding new cases and having them treated at the medical centers to non-infectiousness. This change has enabled the clinics to devote a much higher percentage of their time to the most essential points, contact tracing, educating the public, and conducting more routine surveys.

In July 1945, a special study was undertaken in order to determine how venereal diseases were found. Every venereal disease reported to the health departments from July 1, 1945 through December 31, 1946 was tabulated as to why they came in for diagnosis and subsequent treatment. It was learned that twenty-four per cent came in because of symptoms or curiosity, more popularly accredited to education. Forty-seven per cent came in because they were named as a contact of a known venereal disease and were asked to do so by the health department. Twenty-five per cent came in due to routine examinations. These examinations were classified as follows: prenatal, premarital, food handler, industrial, school surveys, military separations, and other diagnostic examinations. Reason for admission was not stated for four per cent of the cases.

A tabulation made by the statistical unit of the serological tests done for syphilis by the State Laboratory for 3½ years reveals that out of 1,028,806 tests done, 11,404 tests or 10 per cent were positive. This study begun in January 1943 and completed in June

1946, was conducted in order to determine the results of each test by purpose, sex, color, and occupation. The total specimens tested, the total and per cent positive by sex and color, occupation, and purpose are shown below:

	Classification	Total Tests Done	Total Tests Positive	Per Cent Tests Positive
Total	By Sex & Color	1,028,806	111,404	10
White Male		182,639	10,256	5
Female		353,260	12,567	3
Colored Male		143,540	31,525	21
Female		273,838	49,239	17
Indian Male		1,095	153	13
Female		4,044	337	8
Others & Unknown		70,390	7,327	10
Total	By Occupation	1,028,806	111,404	10
Cosmotologist		26,308	786	2
Midwife		2,197	148	6
Foodhandler		76,307	5,484	7
Domestic		87,984	10,452	11
Teacher		11,318	472	4
Military		5,096	237	4
Others & Unknown		819,596	93,825	11
Total	By Purpose	1,028,806	111,404	10
Diagnosis		299,685	41,103	13
Check on Treatment		57,082	20,576	40
Routine		289,913	23,977	8
Survey		22,158	1,432	6
Prenatal		169,379	5,614	3
Marriage		68,745	3,184	4
Others & Unknown		127,844	15,518	12

Special attention should be noted of the gains made in infant mortality due to syphilis. In 1933 the rate was 0.8; in 1946, it was 0.3 per 1,000 live births. To express it in another way, there was 59 deaths in 1933 reduced to 34 in 1946, a decrease of 62½ percent.

One might ask. "What are we accomplishing towards controlling venereal

diseases, and syphilis in particular?" To answer this question, it is first necessary to know what percent of the new previously untreated cases that existed in each year were reported to the State Board of Health. If we assume that the same percent of existent cases of syphilis were reported in 1947 as in 1940, then we know definitely that we are getting

rid of the latent and late stages of syphilis. Last year there were 4,317 cases in these stages reported; in 1940 there were 17,579 cases reported—four times as many as last year.

The picture is not so bright for the primary and secondary stages, however. Last year there were 4,072 cases reported as compared with 2,611 in 1940. This rise can be explained to a certain extent as due to the influx of returning servicemen, the finding of syphilis in the earlier stages quicker because of contact tracing and education, and due to better treatment facilities. The fact that thirty percent of the cases in 1946 were under 20 years of age as compared with sixteen percent in 1940 bears further proof.

The education given the servicemen taught them the symptoms of venereal diseases and to secure immediate treatment. This certainly facilitated earlier diagnosis among them and their contacts.

Prior to 1944, there was no universal system used in this state for interviewing patients, tracing their contacts, and reporting the results of investigation. The adoption of this system definitely contributed to finding a higher percentage of admissions in the primary and secondary stages. Every case found there should disclose a minimum of two contacts and until contacts supersede case, we cannot hope to materially lessen the incidence.

Coitus can only be controlled by the parties concerned, and it is equally true that we can secure the names of contacts of the unfortunate person who may become infected only through persuasion, and by impressing upon him his inescapable duty to society.

It is my candid opinion that the success or failure of the venereal disease control program depends upon a successful contact program, and that is of paramount importance to activate it.

The role that penicillin played in the treatment of syphilis played an important part in getting people to voluntarily report for treatment. This brought

out by the fact that we had 14,169 cases of gonorrhea reported last year as compared with 4,697 cases in 1940. No one believes that there were three times as many cases of gonorrhea in 1947 as there were in 1940. The knowledge that syphilis could be cured in less than two weeks and gonorrhea in one day by the latest method of treatment did not tend to make people hide their disease.

In spite of the progress made in the finding, treating, and curing of venereal diseases, more effort should be expended in getting rid of them entirely. Even now we are averaging little better than one contact per patient in our interviewing of infectious syphilis and gonorrhea. Ideally, we should get three names from each patient. This based on the theory that for syphilis to hold its own from year to year, it must be contracted from one person and passed on to another.

From our statistics, we have already learned that one-half of the contacts named and who are examined are found not infected. Therefore, we should strive for the name of the person from whom the patient acquired the disease, the name of the one that he gave it to, and the one who was lucky enough not to get it.

More speed should be used in bringing named contacts in for examination and subsequent treatment if necessary. About thirty-five percent of the contacts named are permitted to go three months or longer before they are brought in for examination which is a serious mistake, due to—shall we say—procrastination? A lot of syphilis can be spread in this length of time.

Every step should be taken towards securing the cooperation of sources outside the health department; namely, private physicians, hospitals, institutions, and armed forces. Last year eighty-eight percent of all syphilis cases were reported by the health departments. We all know that the percent of cases diagnosed by other sources is over twelve percent of the total.

We should redouble our efforts to refer every applicable patient to the

Rapid Treatment Center. Thus far, seventy-five percent is the highest percentage of infectious, syphilis admissions referred in six month period. I repeat for emphasis that it is recognized by all that the patient is more completely treated at either center, does not lapse from treatment, and permits the health department to spend more time finding new cases.

Such a report as this may not be news or of interest to you, but it seems to me from a research point of view, it is of value to the good health of the nation and such data informative when accumulated over a period of years.

With the State Laboratory of Hygiene's diagnostic serological services to all, regardless of their economic status;

with the State Legislature's passage, in 1919, of a law requiring compulsory treatment, in recognition of the serious public health problems posed by syphilis, gonorrhea and chancroid; with the State Board of Health's regulation for the serological testing of food handlers; with the passage, in 1937, of the State law requiring the serologic examination of domestic servants; with the prenatal and pre-marriage laws, passed in 1939, and with supporting equipment and our knowledge of treatment and control of venereal diseases, we should not falter by the wayside, but should gird our loins and not be satisfied until we have eradicated every venereal disease—each a relentless killer—from the face of the earth.

APPENDICITIS

BY ALFRED T. HAMILTON, M.D., F.A.C.S.

Raleigh, N. C.

Of all the causes of death in the United States, appendicitis offers the greatest opportunity for reduction of mortality and morbidity through the combined cooperation and aggression on the part of patient and physician. Although in recent years there has been affected a remarkable improvement in statistics in this disease as a result of the use of sulfanamides, penicillin and streptomycin, that improvement should not disguise the still existing facts that appendicitis kills 6600 people in the United States every year and that with few exceptions that entire mortality is preventable. Only rarely does early acute uncomplicated appendicitis result in prolonged illness or death; rather, these are the consequences of delay in diagnosis and treatment, and the responsibility for error in this regard must rest upon the public and the medical profession alike; and, further, steps to insure early and accurate treatment must be taken by both.

The most important concept in the satisfactory management of appendi-

citis is that of the urgency of abdominal pain. The widespread impression on the part of the public that abdominal pain can safely be endured for a day or two, or worse, treated by laxatives, is responsible for more abdominal catastrophe than any other single factor. Closely allied with this is the sometimes casual attitude of physicians relative to "green apple colic" and the like, and the injudicious instruction on their part concerning the use of laxatives for patients whose abdomen they have sometimes not even seen. It is understandable, considering the frequency of abdominal pain not of appendiceal origin, how these circumstances exist; on the other hand, since the mortality of appendicitis threatened in the second twenty-four hours will be **three times** that treated in the first, there can be no justification for them. Every instance of abdominal pain should demand, first, no medication unless prescribed, and second, examination by a physician. Even these precautions will not entirely suffice, since the diagnosis of appendi-

icitis may be very difficult and fatalities will inevitably result from mistaken diagnosis, as will be discussed subsequently. Nonetheless, early attention to a potentially dangerous malady and proper restraint from harmful medication will ordinarily protect the individual case from the serious consequences of mismanagement.

The appendix is a small, wormlike, intestinal pouch, hanging, in one of many positions, from the end of the first portion of the large intestine. It is by its very structure, extremely liable to obstruction and infection, since it hangs, blind, at the lower end of the fluid-filled cecum and is prone to catch, in much the manner of a drain-trap, solid fecal particles.

There are two types of appendicitis, the first a simple primary infection which in some instances may spontaneously subside. The second, in which a factor of obstruction of the appendiceal tube exists, is practically always progressive. In either case, uninterrupted progression proceeds to gangrene, then perforation, and, finally peritonitis. Nature may step in where we fear to tread, or neglect to tread, and wall off, through the adhesion of surrounding intestine and omentum, the inflamed appendix and a localized abscess may result. This is certainly to be desired as compared with a spreading peritonitis, but compares unfavorably indeed with an early operation and a quick recovery with almost complete absence of hazard. Peritonitis following rupture of an appendix is a suppurative inflammation of the lining of the abdominal cavity. Since that lining is extremely absorptive, its inflammation has severe general effects, which usually, formerly, progressed to death—either immediately or by stages involving multiple intra-peritoneal abscesses, multiple abscesses of the liver, septic involvement of the intra-abdominal veins, and infected clots to the lungs. It is true that with the advent of the sulfa drugs, penicillin and streptomycin, the development of these complications has been greatly reduced, and the incidence of

death in case they do develop has been markedly lowered. Even so, the discomfort, length of illness anxiety, and expense, which result from them are to be avoided by little effort that expended by family and doctor toward early diagnosis.

Appendicitis occurs far more frequently between the ages of 15 and 35 but the lower incidence in the aged and the young should not encourage complacency or a sense of immunity in any individual case of pain, particularly since the mortality in the old and young is much greater than in the middle group, the outstanding cause of which is difficulty of and delay in diagnosis.

Although it is inaccurate to say that the course of appendicitis may be "typical," the most usual train of symptoms is one of crampy, insistent, generalized abdominal pain often associated with a distaste for food and not infrequently later attended by nausea and vomiting, followed after a variable period by migration and localization of the pain in the right lower abdomen. As a rule there is a degree or two of temperature elevation; there may be a day's constipation; there may be such noticeable symptoms as pain on cough, on walking, or jarring. On medical examination this "usual" patient will have localized abdominal tenderness and often some local rigidity of the abdominal wall. More often than not he will have a coated tongue and rectal tenderness on the right. He will ordinarily have an elevation of his white cell blood count from the normal of about 7,000 to somewhere between 10 and 20,000, and certain white cells will often rise from their normal percentage of around 70 to from 85 to 95. The urine examination will show no abnormalities and careful chest examination will reveal no evidence of respiratory or cardiac disease. Few literate patients and no doctor would err on early diagnosis if every case of appendicitis were to progress as just described. Unfortunately pain may be slight: nausea and vomiting may be absent; if the appendix lies behind the colon, there may

be very little tenderness and no rigidity; if the appendix lies on the urinary tube leading from the kidney to the bladder there may be pus and even blood in the urine. If the appendix points upward, there may be no rectal or pelvic tenderness; if it lies high enough in the abdomen, the tenderness may be all upper abdominal; in some cases because of congenital displacement of the large bowel, the pain, tenderness, and rigidity may even be altogether on the left side of the abdomen. Many instances of gangrenous appendicitis are seen in which there is no elevation of temperature and no change in the white count.

If there be cause for doubt in cases where the trouble is actually appendicitis, consider the difficulties which confront one where appendicitis is stimulated by some other disease. All intra-abdominal surgical emergencies, such as acute gall bladder disease, acute infection of the pancreas, perforation of a duodenal ulcer, gangrene of a small outpocket of the small bowel known as Meckel's diverticulum, may, under a typical circumstance, be confused with appendicitis and may in rare cases completely and in detail mimic the so-called "usual" case. In addition, there are other non-urgent disorders such as ovulatory rupture of an ovarian follicle, inflammation of the ovarian tubes, adenitis (kernels) of the attachment of the intestine to the back of the abdomen, ordinary acute indigestion, or, medically more accurate, food poisoning or enteritis, which may paint a nearly identical clinical picture.

These diagnostic problems are those of the physician, not the patient. They are herein presented however to present to the lay reader some understanding of the possible fallibility of medical diagnosis, and, with that understanding, some realization of the necessity on the part of the medical profession for a practical on-the-fence, middle-of-the-road approach to the problem of whether or not to operate in a given instance of abdominal pain. No one, patient or doctor, has any valid doubt

of the necessity of operating in the clear-cut, established instance of early appendicitis. There is no other proper treatment; there is no place for delay after the diagnosis is established.

There are, however, two groups of suspected cases which bear special management; (1) the mild, doubtful case which can stand close and careful and repeated observation for a short period, and (2) the more acute doubtful case which requires early operation to **safe-guard** against perforation in the event the disease is appendicitis. There should, in abdominal emergency, be no place in the patient-physician relationship for reticence or "white lies." The patient or his family in the doubtful case should properly understand the frequent impossibility of absolute diagnosis and should be prepared for the necessity for exploration for safety's sake, and should be cognizant of and compliant with the possibility that a normal appendix may be removed as a result of such exploration. Quite frequently under such circumstances, other urgent disorders may be discovered and corrected at the time of operation. In any case, the useless and undesirable appendix will be removed, and the operative mortality for such a procedure will be less than one fourth of one percent. Compare this figure, if you will, with a mortality of six percent if a doubtful case is allowed to proceed without operation to perforation! Too often the honest surgeon is confronted by indignation on the part of the patient's family when, after operation, he forthrightly states that the appendix was normal; too often the anxious and concerned family would prefer to be even falsely told that the appendix "looked bad" when it actually was normal.

The preceding is not to be taken as a justification for haphazard diagnosis or for headlong, injudicious surgery. In no medical entity is careful, conscientious and thorough study to be more desired than in the case of abdominal pain, and surgery should be undertaken only where failure to do

so might reasonably be expected to result in comparative harm to the patient.

Much of what has been said may be considered applicable in a less urgent sense to the very controversial problem of "chronic appendicitis." Recurrent attacks of right-sided abdominal pain are abnormal and if not assignable to some other demonstrable disorder, such as nonsurgical ovarian pain, bowel dysfunction, kidney disorders and the like, may very justifiably be considered, on its merits, to be pain possibly remediable by exploratory surgery. The recurrent pain in childhood resulting from chronic inflammation of the glands of the mesentery is an important instance of pain suggesting recurrent appendicitis which is in fact often relieved by the removal of an innocuous appearing appendix. Also, not infrequently, in instances of non-acute, low grade, recurrent episodes of lower abdominal pain, the exploring surgeon will find as the probable cause, the congenital malformation known as Meckel's diverticulum, the removal of which with the normal appendix will often result in complete elimination of the patient's complaint.

A word about the operation for removal of the appendix. Early and under favorable circumstances, it may be a very simple and easy operation. Unfortunately, this is frequently not the case and it may be technically an extremely difficult one. The patient is given an anesthetic, which depending on their general health, preference, and special circumstances, may be spinal, ether, gas, intravenous, or local. An incision is made, the location and type of which will depend upon the certainty of diagnosis and presumed location of the appendix. The initial portion of the large bowel is found, delivered into the wound and the attached appendix isolated. Its blood supply is divided, the vessels tied and the appendix tied across its base, cut off, and removed. The layers of the abdominal wall are closed separately, and the operation is

over. This, if the appendicitis is early. There may have already developed complications. If an abscess has formed and the appendix is easily found and easily removable, the appendix is taken out as above described, and the abscess drained. This necessitates a considerable period of wound drainage, and if the appendix was not safely removable, a second operation later.

Postoperatively, most severe cases indicate the use of the sulfanamides, penicillin and often streptomycin. Where diffuse peritonitis is present, an inlying "stomach tube" is used to keep down distension and intestinal activity. Often because of vomiting and sepsis, the patient is dehydrated and will need intravenous fluids. Most surgeons nowadays get their patients up early, since this procedure, although uncomfortable at first, greatly reduces the ultimate discomfort and the likelihood of infection in the lungs and veins and does no harm at all to the operative wound. The same is true of an early return home if circumstances there permit.

A preperequisite to such a home coming is the realization that whatever complications develope, these would probably have developed had the patient remained in the hospital.

Summary

(1) Abdominal pain in any patient should forbid the administration to that patient of medicine, food, or fluids until seen by a physician.

(2) Abdominal pain in any patient should demand on the part of the physician, early, careful, and if necessary, repeated examination.

(3) Acute appendicitis merits prompt operation.

(4) Doubtful cases of abdominal pain should be subjected to early operation where the diagnosis of acute appendicitis cannot be excluded and where delay is hazardous.

(5) Recurrent right sided abdominal pain which cannot by study be attributed to other disease than appendicitis, should be managed by abdominal exploration.

NOTES AND COMMENT

BY ACTING EDITOR

OUR FRONT COVER—John Hamilton Hicks, born July 3, 1947, son of Mr. and Mrs. Lewis F. Hicks, Chapel Hill, North Carolina. When a man gets old enough to have grandchildren and when intelligent young people have confidence enough in an old man to name a child after him, perhaps the old man may be excused for thinking well of the child. Until such time, however, as Johnnie can speak for himself you will just have to take the Acting Editor's word for it—that he is a healthy specimen and that in his own right he deserves a place on the front cover of our Health Bulletin.

MRS. COOPER A multitude of people were shocked and saddened by the death of Mrs. George M. Cooper on March 18th. In a very real sense she was one of North Carolina's foremost health workers, although she was never on the Public Health pay roll.

As wife of Dr. George M. Cooper, she was a genuine partner in all the public health activities in which Dr. Cooper engaged. She was known and admired from one end of the State to the other.

At her funeral services when the minister read from the thirty-first Chapter of Proverbs, beginning at the tenth verse, one could not escape from the opinion that this part of the Holy Scriptures was written especially for Mrs. Cooper.

CHILD AND MATERNAL HEALTH—For years the May Health Bulletin has published the vital statistics which deal particularly with the bringing of new life into the world. On page fifteen you will find tables giving the number of live births, the birth-rate, the number of infants dying under one year of age, the infant mortality rate, the number of mothers dying during the process of bringing forth new life and the maternal mortality rate for each state in the United States for the year 1946,

the most recent information which has been released by the United States Bureau of Census. On page sixteen you will find comparable information for each county in North Carolina for the year, 1947. The figures for North Carolina for 1947 are provisional; that is, they are approximately correct but do not represent the exact number which will eventually be reported for 1947.

When we look over the table in Page fifteen we will find that in 1946 the birth-rate for the entire United States was 23.5. During the same year the birth rate of North Carolina was 27.7. Our provisional rate for 1947 is 29.3. Only six states had a higher birth rate in 1946 than did North Carolina. They are Idaho, Mississippi, New Mexico, North Dakota, South Carolina and Utah, New Mexico led the nation with a birth rate of 34.2.

When we consider the infant mortality we find that for the entire United States in 1946 the rate was 33.8. North Carolina's infant mortality rate in 1946 was 37.2. Our provisional rate in 1947 was 35.3. Fourteen states and the District of Columbia had higher infant mortality rates than North Carolina. In 1945—13 states and the District of Columbia had higher rates than North Carolina. Rapid improvement in the protection of infants has been made throughout the nation. North Carolina can take pride in its improvement. For 1945 our rate was 43.3—thus in the race for improvement North Carolina not only lowered her rate substantially but she is doing it just a little bit faster than some of the other states in the Union.

We are really working hard to reduce our maternal mortality rate. In 1946 the rate for the United States was 1.6,—the rate for North Carolina was 2.0. We were tied with Kentucky, Louisiana and New Mexico. Seven other states had higher rates. Our provisional infant mortality rate for 1947 is 1.7. As

an indication of the progress which we are making we would like to call attention to the fact that for the five-year period 1932-1936 our maternal mortality rate was 7.1. The rates for the years 1941-1947 are as follow:

	Birth Rate	Infant Mortality	Maternal Mortality
1941	23.7	59.8	4.0
1942	25.2	49.2	3.4
1943	28.1	46.7	3.2
1944	24.9	45.4	3.0
1945	23.4	44.7	2.7
1946	27.7	37.2	2.0
1947	29.3*	35.3*	1.7*

*Provisional

When we begin to make inquiry into the problems of North Carolina we find that our provisional rate for infant mortality was 35.3 in 1947. There were five counties with rates over 50; twenty-three counties with rates between 40

and 50; twenty-eight counties with rates of less than 30; eleven counties had less than 25; five had rates less than 20; two had rates less than 15. One of these was Hyde County on the Eastern Seaboard—the other was Mitchell, in the extreme Western part of the State. Both of these counties have a relatively small population and consequently a small number of births, there being only 156 births and two infant deaths reported so far for 1947 in Hyde. In Mitchell County there were only 443 births and five infant deaths reported for the year 1947. Perhaps these small numbers are not significant but when we go through the list of counties with low rates we find them almost equally distributed throughout the state. When we get down to inquiring into the cause of infant mortality in the State, we will have to consider other factors and geographical location.

Spring is the safest season in the accident records. But before you start thumbing your nose at fate, remember that "the safest season" still claimed about 250 victims a day. A howl in the rear of your car may mean two things. You need grease in the differential—or you've just backed into someone. The National Safety Council asks drivers to look before they back, and not to depend on the rear view mirror.

MINERAL OIL DECREASES CAROTENE IN BLOOD PLASMA, MAY HARM LIVER

It is doubtful whether mineral oil can be used safely, year in and year out, either as a fat-substitute in foods, as a remedy for constipation, or in weight-reducing diets. Evidence as to its dangers is reviewed in an editorial appearing in the October 25 issue of **The Journal of the American Medical Association**.

"The use of mineral oil in foods such as imitation mayonnaise or salad dressing increased during the war because of the shortage of biologic fats and oils," the editorial says. "Such food substitutes are used extensively also in weight-reducing diets. Previous reports concerning the interference of mineral

oil with the absorption of fat-soluble vitamins, particularly vitamin A and its precursor, carotene, were based mostly on animal experiments in which large quantities of mineral oil were used, compared with what would ordinarily be taken by man. (Dr. A. C.) Curtis and his associates showed that the ingestion of mineral oil by human beings will prevent a rise in blood carotene consequent to simultaneous intake of foods rich in carotene; the subjects in this experiment were observed for only 15 days.

"Recently (Dr. B.) Alexander and his associates made similar observations on human beings for three to eight weeks

.... The decrease in plasma carotene was noted within one to two weeks: it progressed further in many cases as the intake of mineral oil continued. Neither significant changes in the plasma vitamin A nor untoward clinical manifestations occurred. Since it is well known that the concentration of vitamin A in the blood remains relatively constant for as long as six months in normal persons subjected to restricted intake of vitamin A and carotene, a conclusion could not be drawn on these subjects with regard to the effect of mineral oil on the supply of vitamin A as such to the body. The conclusion, however, was that in man the simultaneous ingestion of mineral oil with food prevents substantial amounts of food carotene, a precursor of vitamin A, from entering the body.

"While many physician believe that mineral oil is not absorbable and therefore can do no harm, some of it prescribed for constipation does pass

through the intestinal wall and on into the liver (Dr. W. C.) Alvarez reviewed the work of Frazer, Stewart and Schulman, who found that if mineral oil was ingested without previous emulsification only a small percentage of it was absorbed, but that when given in the form of a fine emulsion, as many persons take it, about one-half of it went through the wall of the bowel....

"These observations raise the grave question, Alvarez says, whether mineral oil can be used safely, year in and year out, as some persons use it; they also raise the question whether purveyors of food should ever be allowed to substitute mineral oil for the edible fats. The Council on Foods and Nutrition of the American Medical Association concluded in a report published in 1943 that the indiscriminate use of mineral oil in foods and cooking is not in the interest of good nutrition and that any such use should be under careful supervision of a physician."

CHILD EATS COLORED CRAYONS, ALMOST DIES OF ANILINE DYE POISONING

Children and dogs often eat strange things, among them wax crayons, without apparent harm. But, warns Esther B. Clark, M.D., pediatrician at the Palo Alto Clinic in California, certain colors of crayons may be not only unpalatable but dangerous and even fatal.

In The Journal of the American Medical Association she reports the case of a 28-month-old boy who was almost fatally poisoned by eating orange and yellow wax crayons. The poison was created by the use of para red in the coloring matter, which was converted into an aniline dye in the body.

Some hours after the boy had eaten an orange crayon his parents noticed that his hands were blue, but thought it was paint. At school the next day he almost finished a yellow crayon

before his teacher caught him, noticed his extreme blue color, and decided he was having a heart attack. The boy rapidly grew worse until all of the crayon was apparently removed from his stomach, and oxygen therapy and a blood transfusion brought about complete recovery.

The only safe way to dry clean is to send your clothes to the cleaners, the National Safety Council says. But if you insist on cleaning at home, never do it in the house. The tiniest spark—even the static electricity from rubbing wool or silk—can ignite some fumes. Keep your hands out of the fluid as much as possible, air the clothes in the yard, keep children and pets away.

**LIVE BIRTHS, INFANT MORTALITY AND MATERNAL MORTALITY
UNITED STATES, 1946**

STATE	Live Births		Infant Mortality (Death in the 1st Year of Life)		Maternal Mortality	
	Number	*Rate Per Thousand Population	Number	Rate Per Thousand Live Births	Number	Thousand Live Births Rate Per
United States	3,288,672	23.5	111,063	33.8	5,153	1.6
Alabama	79,863	28.4	3,025	37.9	209	2.6
Arizona	16,345	26.2	679	41.5	35	2.1
Arkansas	45,280	24.0	1,283	28.3	95	2.1
California	218,484	22.9	6,705	30.7	266	1.2
Colorado	29,518	25.9	1,180	40.0	57	1.9
Connecticut	41,457	21.1	1,154	27.8	38	0.9
Delaware	6,802	23.7	202	29.7	9	1.3
Dist. of Columbia	18,601	22.1	767	41.2	31	1.7
Florida	53,688	23.2	2,116	39.4	159	3.0
Georgia	85,667	27.4	3,075	35.9	225	2.6
Idaho	13,787	29.2	453	32.9	22	1.6
Illinois	174,825	21.8	5,316	30.4	237	1.4
Indiana	85,515	22.7	2,697	31.5	112	1.3
Iowa	56,186	22.1	1,681	29.9	59	1.1
Kansas	39,751	21.4	1,217	30.6	60	1.5
Kentucky	72,542	26.4	2,900	40.0	144	2.0
Louisiana	68,670	27.3	2,553	37.2	139	2.0
Maine	20,326	23.2	833	41.0	32	1.6
Maryland	50,347	23.0	1,713	34.0	56	1.1
Massachusetts	94,288	20.5	2,984	31.6	126	1.3
Michigan	139,277	23.0	4,552	32.7	167	1.2
Minnesota	67,266	23.8	1,925	28.6	62	0.9
Mississippi	61,690	29.4	2,311	37.5	194	3.1
Missouri	80,684	21.4	2,665	33.0	131	1.6
Montana	12,858	26.9	448	34.8	18	1.4
Nebraska	28,052	22.0	846	30.2	29	1.0
Nevada	3,283	24.2	130	39.6	6	1.8
New Hampshire	11,092	21.5	348	31.4	14	1.3
New Jersey	95,218	22.1	2,715	28.5	124	1.3
New Mexico	18,087	34.2	1,415	78.2	37	2.0
New York	286,546	20.9	8,345	29.1	343	1.2
North Carolina	100,679	27.7	3,742	37.2	203	2.0
North Dakota	15,264	28.4	519	34.0	16	1.0
Ohio	169,600	22.6	5,312	31.3	214	1.3
Oklahoma	50,416	22.7	1,639	32.5	83	1.6
Oregon	30,076	20.7	833	27.7	31	1.0
Pennsylvania	218,376	21.8	7,196	33.0	332	1.5
Rhode Island	16,761	22.5	494	29.5	24	1.4
South Carolina	53,963	28.3	2,235	41.4	148	2.7
South Dakota	14,580	26.6	432	29.6	15	1.0
Tennessee	77,336	25.8	2,974	38.5	142	1.8
Texas	181,579	26.1	7,564	41.7	295	1.6
Utah	18,220	28.6	496	27.2	25	1.4
Vermont	8,362	23.7	284	34.0	12	1.4
Virginia	75,861	25.4	2,935	38.7	124	1.6
Washington	51,988	23.1	1,734	33.4	62	1.2
West Virginia	48,673	26.9	1,990	40.9	73	1.5
Wisconsin	74,755	23.6	2,246	30.0	108	1.4
Wyoming	6,188	23.5	205	33.1	10	1.6

*Est. pop. of the U. S. excluding armed forces overseas, July 1, 1946.

Source: "Current Population Reports," P-25, No. 2.

INFANT AND MATERNAL DEATHS WITH RATES PER 1,000 LIVE
BIRTHS AND LIVE BIRTHS BY COUNTY—1947
(BY PLACE OF RESIDENCE)

COUNTY	Infant Mortality		Maternal Mortality		Total Live Births	Place of Residence	COUNTY	Infant Mortality		Maternal Mortality		Total Live Births	Place of Residence
	Place of Residence	No.	Place of Residence	No.				Place of Residence	No.	Place of Residence	No.		
	No.	Rate	No.	Rate	No.			No.	Rate	No.	Rate	No.	
Alamance	50	26.0	1	0.5	1,920		Johnston	59	31.8	5	2.7	1,856	
Alexander	17	41.6	1	2.4	409		Jones	12	38.7	1	3.2	310	
Alleghany	6	34.3			175		Lee	23	33.0	1	1.4	696	
Anson	30	38.2	1	1.3	786		Lenoir	58	43.6	5	3.8	1,329	
Ashe	21	33.8	3	4.8	622		Lincoln	19	27.1	1	1.4	700	
Avery	16	36.7	1	2.3	436		McDowell	11	18.6			592	
Beaufort	45	41.8	3	2.8	1,076		Macon	14	35.2	1	2.5	398	
Bertie	30	38.4	2	2.6	781		Madison	23	47.2			487	
Bladen	37	40.1	2	2.2	922		Martin	29	33.0	1	1.1	880	
Brunswick	18	32.0			562		Mecklenburg	197	38.9	8	1.6	5,061	
Buncombe	96	31.2	5	1.6	3,079		Mitchell	5	11.3			443	
Burke	28	22.4			1,248		Montgomery	24	49.8	1	2.1	482	
Cabarrus	48	25.8	5	2.7	1,859		Moore	24	28.8	1	1.2	832	
Caldwell	51	36.5	2	1.4	1,398		Nash	72	39.1	5	2.7	1,843	
Camden	3	26.8			112		New Hanover	97	53.4	3	1.7	1,816	
Carteret	17	26.7			636		Northampton	25	31.6	1	1.3	791	
Caswell	17	33.7	1	2.0	505		Onslow	38	46.2			822	
Catawba	53	28.5	2	1.1	1,859		Orange	21	25.4	1	1.2	827	
Chatham	24	38.8	2	3.2	618		Pamlico	13	45.9	1	3.5	283	
Cherokee	18	32.6	2	3.6	552		Pasquotank	29	44.6	2	3.1	650	
Chowan	9	26.0			346		Pender	19	39.2	1	2.1	485	
Clay	4	25.2	1	6.3	159		Perquimans	10	41.5			241	
Cleveland	65	35.1	2	1.1	1,851		Person	32	40.0	2	2.5	801	
Columbus	77	52.3	3	2.0	1,473		Pitt	73	40.2	3	1.7	1,817	
Craven	42	34.2	5	4.1	1,228		Polk	9	28.9			311	
Cumberland	95	42.6	5	2.2	2,231		Randolph	38	29.7			1,281	
Currituck					118		Richmond	46	40.2	5	4.4	1,144	
Dare	3	30.9			97		Robeson	85	30.3	3	1.1	2,808	
Davidson	48	31.1	2	1.3	1,541		Rockingham	61	37.3			1,637	
Davie	10	27.3			366		Rowan	60	35.4	3	1.8	1,695	
Duplin	47	41.9	2	1.8	1,122		Rutherford	37	29.2	4	3.2	1,269	
Durham	93	35.5	1	0.4	2,617		Sampson	50	32.4	1	0.6	1,543	
Edgecombe	43	28.1	3	2.0	1,530		Scotland	42	56.4	1	1.3	745	
Forsyth	158	42.0	6	1.6	3,762		Stanly	42	41.6	1	1.0	1,009	
Franklin	33	41.6	2	2.5	794		Stokes	13	21.7			598	
Gaston	107	37.9	1	0.4	2,824		Surrey	51	34.7	2	1.4	1,470	
Gates	10	41.7	1	4.2	240		Swain	6	17.0			352	
Graham	8	39.6			202		Transylvania	8	16.7			480	
Granville	24	30.0	2	2.5	801		Tyrrell	5	31.3	1	6.3	160	
Greene	12	22.4	3	5.6	536		Union	39	33.3			1,170	
Guilford	139	30.0	9	1.9	4,635		Vance	44	51.0	5	5.8	863	
Halifax	74	42.8	5	2.9	1,728		Wake	110	31.8	8	2.3	3,454	
Harnett	32	22.9	1	0.7	1,396		Warren	28	39.3	1	1.4	713	
Haywood	33	30.0	1	0.9	1,100		Washington	10	29.7	1	3.0	337	
Henderson	28	36.5	2	2.6	768		Watauga	22	41.7			528	
Hertford	20	40.2	2	4.0	497		Wayne	52	39.8	4	3.1	1,308	
Hoke	27	59.5			454		Wilkes	49	38.1	1	0.8	1,286	
Hyde	2	12.8			156		Wilson	74	44.4	7	4.2	1,667	
Iredell	44	29.4			1,498		Yadkin	12	22.1	2	3.7	544	
Jackson	17	34.6			492		Yancey	11	24.9			441	
							Entire State	3,860	35.3	187	1.7	109,372	

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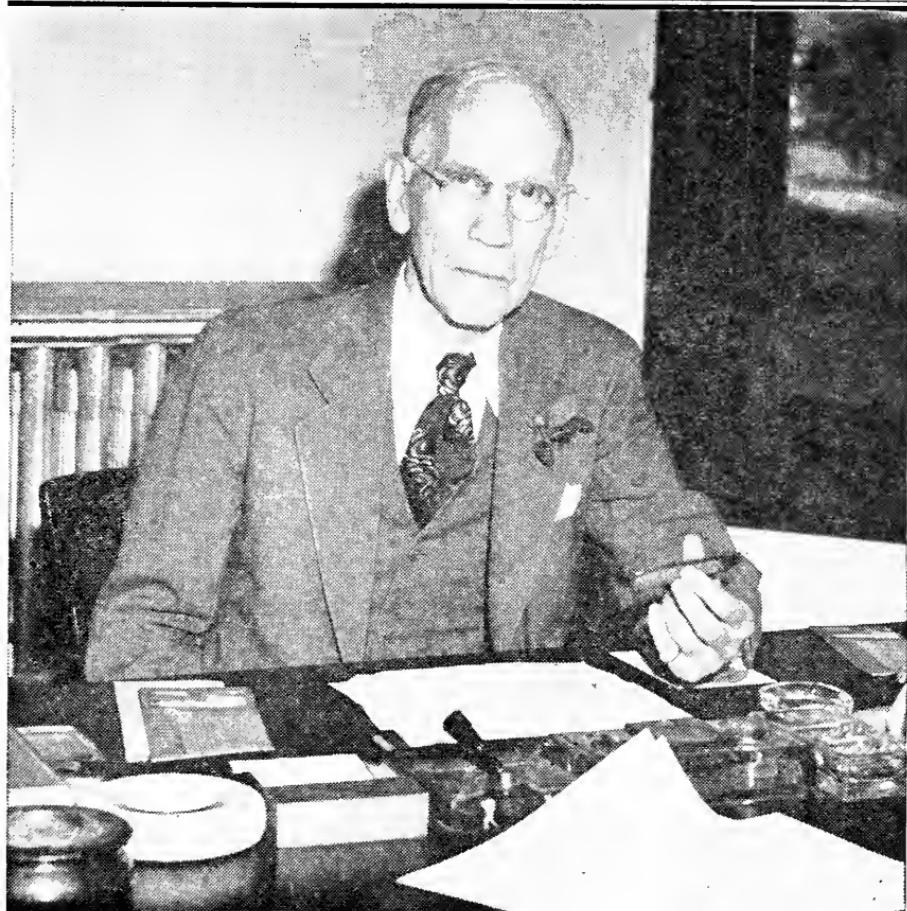
This Bulletin will be sent free to any citizen of the State upon request

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

JUNE, 1948

No. 6



CARL V. REYNOLDS, M.D., STATE HEALTH OFFICER

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The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
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Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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CARL V. REYNOLDS, M.D., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

ANNUAL REPORT NORTH CAROLINA STATE BOARD OF HEALTH

To

CONJOINT SESSION STATE MEDICAL SOCIETY

CARL V. REYNOLDS, M.D.

Secretary and State Health Officer

Pinehurst, North Carolina

May 5, 1948

I COME before you today to give a final accounting of my stewardship in a position to which I was called on November 10, 1934, namely that of your State Health Officer. In this brief foreword, I shall attempt to give you a broad picture of the expansion of Public Health in North Carolina during the intervening period, and I wish it understood, at the outset, that I claim no personal credit for the gains we have made, for it truly represents an outstanding example of organization at work, with a united purpose and a determination to succeed.

My custodianship must be appraised in the light of history, by impartial judges. My administration as your State Health Officer has not been without its mistakes. It is human to err; but I have, under God, sought to fulfill my obligations without fear or favor, and without any thought of self-aggrandizement. I love North Carolina; I love its people. They are my people, sprung

from the same sturdy stock. And when, very shortly, I shall disappear over the western horizon, in search of rest and relaxation, I shall carry with me those blessed memories which can never be erased by geographical change, or by time's ruthless hand.

In this, my last report to you, I shall endeavor to cover, and that very briefly, only the highlights of the past fourteen years. The details have been chronicled in the permanent archives. I have often wondered just what the yearly reports have meant to you and to others with whom copies have been filed. I am afraid they have, all too often, been pigeon-holed, without having been studied. But let me ask you to read the annual reports herewith attached—reports which will not be read by me at this time. I think you will find running through them a sincerity of purpose, and a record of real accomplishment, in spite of the handicaps under which the State Board of Health has been laboring—including salaries too low to secure and hold those best fitted to do a tremendous job. Loyalty and

*This report, the last to be delivered by Dr. Carl V. Reynolds, as State Health Officer, is a review of activities covering his tenure of office.

patriotism are fine attributes; but we cannot overlook the axiom dating back to Bible times that "the laborer is worthy of his hire." We must have the essentials of life and retirement protection, whether we be doctors, nurses, sanitarians, or technicians; and when the State declines to pay a salary commensurate with services rendered, the worker often feels he or she must seek other fields of service.

I could wish for my successor in this office no greater accomplishment than that he might be able to secure for those responsible for carrying on the activities of the State Board of Health salaries commensurate with their training and ability, and in keeping with what they might earn in private work.

The growth of Public Health activities in North Carolina during the period for which I am reporting to you at this time, from a standpoint of investment, is reflected in figures which I have caused to be compiled.

Total expenditures for the fiscal year of 1934-1935 amounted to \$285,944, as compared with \$2,814,937 for the fiscal year of 1946-1947, while total expenditures over this entire period amounted to \$21,291,268.

Of this total, only \$5,903,777 has come from State appropriated funds; \$2,199,-632 from philanthropic and other funds, and \$13,187,858 from Federal funds. I have omitted the odd cents in each instance.

And so, you see, large sums have been invested in Public Health in North Carolina. You will note the contrast between what the State Legislature has given us and what has come from the Federal Government, to say nothing of the large amounts that have come from such philanthropic agencies as the Reynolds Foundation, the Rockefeller Foundation, and other sources. When our Legislators in Raleigh become as Public Health conscious as those in our National Legislature, then we may expect to go forward with greater strides; and when State Budget officials are willing to let our professional and other trained workers have the salaries to which they

are entitled, then we may expect to get and to hold trained public health personnel.

It is a strange commentary that, even when funds are allotted to North Carolina by Federal and other agencies, they are not allowed to be paid in salaries commensurate with services rendered, even though these funds cost us nothing and revert when unused.

Funds appropriated by the Legislature or allocated by the Federal Government should be administered by the Executive head of the department to which they are given, and he should be held responsible for the application of these funds and the results obtained. This is something for you to think over, as physicians, as well as public health minded citizens; for, after all, the State Board of Health is the child of organized medicine.

I suggest, therefore, at this point, that the Medical Society of the State of North Carolina urge its Legislative Committee to press for larger appropriations for public health in this State, by our own Legislature. In doing this, you will not only be advancing the cause of public health, but vindicating the purpose for which the Medical Society created the State Board of Health, through Legislative enactment.

Federal funds first became available in the fiscal year of 1935-1936, since which time we have received millions in allotments, as shown by the preceding summary. From these allocated funds, the doctors and hospitals of North Carolina have received millions of dollars for services rendered—money which, otherwise, would never have been received by them. This has been true especially in the EMIC and kindred programs, including work for crippled children. This money that has been earned by our doctors and hospitals—channeled through the State Board of Health—has not been in the nature of State medicine, contract practice, or anything that smacks of what is commonly known as socialized medicine—but SUPPLEMENTAL medicine, meaning funds that have supplemented,

rather than take the place of, what these doctors and hospitals would have received, if the recipients of the benefits had been forced to draw on their own resources. Many would have been without these services, and the doctors and the hospitals without these supplemental funds, had they not been made available through public health.

Expenditures for any cause must be justified, or the effort nullified. What have we gotten for what has been spent? Even though these expenditures were made over a period that embraced depression, war, and finally, inflation, I think that every dollar has brought results. Much more could have been used to great advantage.

At this point, let us summarize, briefly and concisely, the expanded activities of the North Carolina State Board of Health over the past fourteen-year period, for which I, quite naturally, feel a sense of responsibility, as the administration of affairs was incumbent upon me during the years for which this general report is being made.

We cannot go into detail as to any of the objects mentioned, although I shall discuss some of these briefly during the further rendition of this report.

Here are some of the outstanding accomplishments to which I am happy to refer at this time:—

Organization of the North Carolina School of Public Health—Nursing and Dentistry—at Chapel Hill.

An intensive campaign against venereal diseases, which placed this State in the forefront for the entire nation.

Procurement of the first Negro doctor ever employed by any State Board of Health, for full-time services—and the resultant expansion of health activities in behalf of our Negro population.

Promotion of the Crippled Children's activity, and its resultant benefits to thousands of young folk throughout the State.

Establishment of relations between North Carolina and the National Foundation for Infantile Paralysis, during the epidemic of 1944, which ushered in a new day for the allocation of funds

to State without red tape, and the hospitalization, medical and delayed surgical care of victims of infantile paralysis.

Eradication of mosquitoes in large areas, resulting in bringing the malaria death rate to practically zero.

Experiments in the eradication of flies, as well as mosquitoes, through the use of DDT, thus setting an example for the entire nation.

Establishment of the School-Health Coordinating Service, which promises to be a fertile field for promoting good health ultimately among all the school children of North Carolina, through the processes of health education, screening, referrals, etc.

North Carolina pioneered in the field of Public Health Education, and set the pace for others to follow in this tremendously important field of public health endeavor.

Erection of a new \$350,000 State Laboratory of Hygiene, the debt for which is being amortized by earnings from the Laboratory, together with the new farm as an adjunct to the Laboratory, which saves the people of North Carolina an estimated two and a half million dollars a year.

Work in the field of sanitation has included the erection of approximately a quarter of a million sanitary privies throughout the State, this having minimized the spread of intestinal disorders; water pollution control has been beneficially carried on, and the control of rodents has saved many hundreds of thousands of dollars in damages formerly attributed to these pests, although much remains to be done in this important field. After we made the survey that disclosed 400,000 insanitary privies, we were able to follow up with the erection of more than 200,000 of the sanitary type, in cooperation with the WPA. While this gave me the title of "Prime Minister of the Privy Council," I considered it an honor, and the safe privies a suitable monument to Public Health Endeavors—even as the title, "Vice Commissar," during our intensive war on prostitution, lost its facetious-

ness in the realm of service. "We eradicated our 'Typhoid Mary,'" I reasoned, "so why not apply the same treatment to 'Syphilitic Sue'?"

The establishment of a Bureau of Tuberculosis Control, which already has launched a mammoth case-finding program, designed to locate, finally, every case of tuberculosis in North Carolina, through chest X-rays, more than a quarter of a million of which already have been made.

The setting up of a Bureau of Cancer Control, under competent medical direction, which will be a powerful factor in the detection and cure of cancer in the early stages, and in the promotion of research designed to further the fight against this arch-enemy of mankind.

Expansion of industrial hygiene activities, designed to protect a large segment of our population against diseases due to dust hazards.

Establishment of the North Carolina Academy of Public Health, the first in the entire United States.

Creation of a Bureau of Nutrition and participation in the organization of the State Nutrition Committee, which has won an important place in the State's nutrition and food conservation program.

I consider among the most significant advances in public health during the fourteen years I have been privileged to act as your State Health Officer, the expansion of full-time local health units throughout North Carolina. In 1934, according to the records, there were only thirty-nine counties organized on a full-time basis with medical direction, and eight others had full-time services from a nurse or sanitarian working alone, a practice which the Board no longer approves.

As of December 31, 1947, ninety-six of the one hundred counties in North Carolina had developed some type of local health service. This is an increase of one hundred and forty-six per cent, to say nothing of the increase in population served. Alexander and Henderson were the ninety-fifth and ninety-sixth counties, respectively, which

established the services in July, 1947.

Indeed, we may fairly say that, but for the difficulty of securing personnel, it is likely that all of the one hundred counties could be organized now on a full-time basis. The actual service rendered in the ninety-six counties during 1947 was not operated on a full staff basis, due to a serious shortage of professional personnel, particularly physicians and nurses.

As of December 31, 1947, there were 890 full-time budgeted positions with 79 full-time vacancies. Of this number, 16 were full-time health officer vacancies and 38 were public health nursing vacancies.

Our venereal disease control program now emphasizes largely the treatment of early syphilis in the two rapid treatment centers, located at Charlotte and Durham. Private physicians have referred many cases to these centers, as well as local health departments. During the calendar year of 1947, for example, total admissions to the two centers were 9,001. As of December 31, 1947, since the two centers were opened, 33,856 patients have been admitted. Practically all of the gonorrhea cases have been treated outside the centers, either by private physicians or local health departments.

Until 1937, 6,000 cases comprised the largest number ever reported. This previous high was doubled in 1937, more than tripled in 1938, and then in 1939, we received reports totaling 30,985 cases, an all-time high.

In December, 1937, the Zachary Smith Reynolds Foundation, Incorporated, announced that the income from a \$7,000,000 trust fund would be turned over to the State Board of Health, and the first check, for \$100,000 was turned over to the State Health Officer. At that time, this was the largest amount of money that had ever been donated in the South to preventive medicine.

Time will not permit a detailed recital here, but the records of the State Board of Health's fight against syphilis placing it in the forefront among all American States, is and will remain a

matter of record. Through July 1, 1947, a total of considerably more than four million tests had been run through the State Laboratory of Hygiene, including 552,714 voluntary serological tests among selectees when the draft law became operative in 1941.

I might add in this connection that the entire picture was given by your State Health Officer, in a paper on the progress of the fight against venereal disease in North Carolina, presented in Charlotte, April 20, 1948, the occasion being Social Hygiene Day.

In this fight against venereal disease, every step should be taken looking toward securing the cooperation of sources outside the health department; namely, private physicians, hospitals, institutions, and the armed forces.

Too much emphasis cannot be placed on the importance of follow-up campaigns, and efforts to locate all contacts, in order that the disease may be attacked at its source. We should redouble our efforts to refer every applicable patient to a Rapid Treatment Center. With the State Laboratory's diagnostic serological service open to all, regardless of their status in life; with the State Legislature's passage, in 1919, of the law requiring compulsory treatment; with the State Board of Health's regulation for the serological testing of food handlers; with the passage, in 1937, of the State law requiring the serological testing of domestic servants; with the pre-marriage and prenatal laws now on our statute books, with our supporting knowledge and equipment, we should not falter by the wayside, but should gird our loins and not be satisfied until we have eradicated venereal disease from the face of the earth.

When the future of our program was endangered by the withdrawal of the Reynolds Fund and its transferral to an educational institution, the last Legislature was prevailed upon to provide an appropriation which will insure our continuation of the fight already so successfully waged.

We might go on, from one achieve-

ment to another, in reviewing the work of our State Board of Health, since its establishment. At times, the path has been hard and rugged; at others, good sailing winds blew our way and sent us on apace.

In reviewing some of the things that have been accomplished during the time it has been my responsibility to serve as your State Health Officer, I have chosen the period of 1934-1947 to render an account of my stewardship, which I should do before retiring from office at the end of next month.

I have undertaken not to burden you with details, but simply to give an overall picture of the work as it has passed in review before me. I claim no credit for what has been accomplished, but I do take pride in the progress our State has made in its general health and I give whatever credit is due to those who have labored so faithfully and well.

May I give you just this general summary as my final word in this report to you? It is a comparison of the crude death rate and the rates from specific causes, as reported in 1934 and 1947, the last year for which figures have been compiled:

	1934	1947
Crude death rate, per 1,000 population	10.5	7.8
Infant mortality, per 1,000 live births	77.9	35.4
Maternal deaths, per 1,000 live births	7.5	1.8
Diphtheria, per 100,000 population	6.4	0.9
Malaria per 100,000 population	2.4	0.05
Pellagra per 100,000 population	13.2	1.1
Tuberculosis per 100,000 population	61.2	25.4
Typhoid fever per 100,000 population	2.1	0.4

In closing this, my final report to the Conjoint Session, I do so in a spirit of humility, with a full realization that much remains to be done—great tasks for other and younger hands to take up and carry forward.

I am not saying goodbye. I shall never do that—but, to use an expression which always denotes anticipation of another meeting, “au revoir.” I’m a Tar Heel born; a “mountain white” bred, and when I’m dead I’ll be a Tar Heel and a mountaineer dead. “Tempus fugit.” It waits on no man; nor can I longer wait to obey the call of my only “chick” in far-off California. The call of the daughter and her family has become increasingly louder with the passing of the last few years, and so I shall go for an indefinite stay—not to await the “twilight hour,” but with my face ever toward the rising sun.

It is with a sense of deep gratitude and affection that I take this leave of you, my colleagues and friends—also with a sense of appreciation for the

many kindnesses you have shown me while I have labored among you, as a practitioner of medicine and as a public servant. I thank you for everything.

My parting word is said in behalf of the young man whom the State Board of Health has elected to be my successor, Dr. J. W. Roy Norton. All I ask is that you give him the same consideration you have given me, plus the added facilities for service that will be available as time goes on—for we are living in an age of progress and improvement. To him, I shall shortly say: “Here it is Roy: take it—take the torch and hie you up yonder mountain, to place it on new heights, where its light will shine over a still wider radius.”

And now, again, “au revoir” and “God bless you every one!”

DEPARTMENTAL REPORTS

DIVISION OF PREVENTIVE MEDICINE

G. M. Cooper, M.D., Director

The activities of the Division of Preventive Medicine include the Maternal and Child Health Service under which the Emergency Maternity and Infant Care program for the wives and babies of servicemen has been administered, the Crippled Children’s Service, the mailing room, and the Multilith Department. Through an allotment of Children’s Bureau funds, biologicals are distributed to all local health departments on request.

The work of the Division has been carried on again during 1947 with no professional help, with the exception of the Director. It has been impossible to employ highly trained specialists with the qualifications required by the State Merit System and the United States Children’s Bureau at the salaries allowed by the State schedule. The vacancies for three consultants, two in pediatrics and one in obstetrics, have not yet been filled, but it is hoped that at least one of these places will be filled within the near future.

The EMIC program is being liquid-

ated, by action of Congress, effective July 1, 1947, and applications are now being accepted only for the wives of servicemen who were already eligible for care on that date and for the babies of such eligible women during the first year of life. The program is rapidly being closed out, as shown by the following report for the calendar year 1947:

Maternity cases completed	5,399
Attended at delivery by doctors of medicine	4,505
Attended at delivery by interns and midwives	47
Cases completed before delivery	847
Delivered in hospitals	4,401
Delivered in homes	151
Infant cases completed	973
Cost:	
Maternity cases	\$447,406.13
Infant cases	74,931.45
Total cost	\$522,337.58

Maternal and Child Health Service. The work of the Maternal and Child Health Service, which was overshadowed during the war by the EMIC program, is gradually being expanded and built up to its normal level. In 1947, 2314 maternity and infancy clinics were held in 64 counties and 4 cities, con-

ducted by 211 physicians and attended by:

Prenatal Patients 777 7929 28 8734
 Postpartum Patients 311 2099 6 2416
 Infants 2104 6708 14 8826
 Preschool Children 2237 3689 13 5939

Forty-three thousand and fifty-nine pieces of literature, including Prenatal Care, Infant Care, the Health Bulletin and other miscellaneous special literature were distributed in the M & I clinics.

The salary of a Negro medical social worker is being paid from Children's Bureau funds to work in Duke Hospital, Durham, in an effort to afford better care for the Negro mothers and babies who are patients in Duke Hospital.

Mailing Room. In the field of health education 1,147,867 pieces of literature were distributed. In the maternity and infancy department 24,535 prenatal literature, 92,835 infant literature and 53,159 miscellaneous supplies, and 9,807 miscellaneous midwife supplies were distributed, in addition to 5,589 EMIC forms.

The Multilith Department is efficiently meeting the printing demands of all the divisions of the State Board of Health, with a staff of two multilith operators.

**DIVISION OF LOCAL HEALTH
 ADMINISTRATION**
R. E. Fox, M.D., Director

As of December 31, 1947, ninety-six of the one hundred counties in North Carolina had developed some type of local health service. Alexander and Henderson were the ninety-fifth and ninety-sixth counties, respectively, which voted to establish local health services effective July 1, 1947. During 1947 local public health services in the ninety-six counties were provided by sixty-nine local health departments of the following types: (1) forty-three county health departments, (2) twenty-one district departments, and (3) five city health departments.

It is interesting to note the growth in coverage of full-time local health service during the fourteen years since

I became your State Health Officer. At that time there were only thirty-nine counties organized on a full-time basis with medical direction and eight others had full-time services from a nurse or sanitarian working alone, a practice which the Board no longer approves. This is an increase of 146%. Indeed, we may fairly say that but for the difficulty of securing personnel, it is likely that all one hundred of North Carolina counties could now be organized on a full-time basis.

The actual service rendered in the ninety-six counties during 1947 was not operated on a full staff basis due to a serious shortage of professional personnel, particularly physicians and nurses. As of December 31, 1947, there were 890 full-time budgeted positions with 79 full-time vacancies. Of this number, 16 were full-time health officer vacancies and 38 were public health nursing vacancies.

Training Provisions: During 1947 the following number of public health personnel were included on the training payroll:

Health Officers	4
Public health nurses	25
Sanitarians	30
Sanitary engineers	3
Public health investigators	3
Health educators	1
Bacteriologists	1

Total 67

During 1947 technical consultation and advisory service to local health departments, joint planning with the other divisions of the State Board of Health, and cooperative programs with other state agencies and organizations were carried out by the Division of Local Health Administration under the direction of Dr. R. E. Fox, Director, assisted by Dr. William P. Richardson, District Director.

The following highlight reviews illustrate the nature and scope of activities carried out by the personnel of the Division of Local Health Administration during 1947:

Venereal Disease Control. The pro-

gram of venereal disease control has emphasized largely the treatment of early syphilis in the two rapid treatment centers located in Charlotte and Durham. Private physicians have referred many cases to these centers as well as the various local health departments. During the calendar year 1947 the total admissions to the two centers were 9,001. As of December 31, 1947, since the two centers opened, 33,856 patients have been admitted to the two rapid treatment centers. Practically all of the gonorrhea cases have been treated outside of the centers either by private physicians or local health departments. The number of cases of syphilis reported during the year 1947 was 8,724 as compared to 9,233 in 1946. The number of cases of gonorrhea reported during the year 1947 was 14,169 as compared to 16,082 in 1946.

Public Health Nursing. During the first few months of 1947 there was a full nursing staff consisting of a supervising public health nurse and six consulting public health nurses. Death took one, another on loan from the U.S. Public Health Service was transferred to another state, and a third resigned, leaving a staff of only four by September.

During the year field visits were made to local health departments for consultation service to health officers and public health nursing staff. Only fifteen of the sixty-nine local health departments have supervising nurses. In the departments without a supervisor the consultants have worked with the public health nurses in home visits, clinics, and in schools. Considerable time has been spent in recruitment of new personnel.

In order to help improve the public health nursing service throughout the state the consultants have planned a continuous staff education program. Twenty-nine nurses attended a two-weeks' orientation course at the North Carolina Tuberculosis Sanatorium. In July twenty-four supervisors and public health nurses attended the "Education

for Responsible Parenthood Course" given at the School of Public Health, University of North Carolina. Miss Anita Jones from the Maternity Center Association in New York City conducted a five-day institute on Maternity Nursing September 15-20 with seventy-five public health nurses in attendance. Refresher courses in nutrition have been jointly planned and conducted by the nutritionists for local health departments all over the state.

Field Representative Service. During 1947 a staff of three field representatives assisted approximately 200 clerks and secretaries with the organization of clerical and routine procedures. New records and reports were interpreted to the entire staff of the local health units with the idea of showing how these reports are an appraisal or evaluation of their program. Recently the U.S. Public Health Service, through the Division of Tuberculosis Control of the N. C. State Board of Health, has made tuberculosis case registers available to the counties. The field representatives are assisting in the installation of these registers. At the present time registers are installed or are in the process of being installed in 47 of the 96 counties.

The first attempt at in-service training was made during this year when eight secretaries from over the state came to the State Board of Health for a two-weeks' course of training. This course was sponsored jointly by the U.S. Public Health Service and the State Board of Health.

Health Education. During 1947 the emphasis in the health education program of the Division of Local Health Administration has continued to be on strengthening local health education programs through recruitment, training, and placement of trained, qualified health educators as full-time staff members with local health departments. At the close of the calendar year there were fourteen health educators with local health departments and five health educators employed at the state level. In January, 1948, two of the five health educators at the state level were

given local health education assignments in addition to their supervisory duties and responsibilities. One health educator resigned in October of 1947.

In September, 1947, a Director of Health Education was added to the staff, and the remaining two full-time health educators were assigned to assist with the health education aspects of the programs being carried on by the Division of Tuberculosis Control and the School Health Coordinating Service, respectively.

Six prospective health educators were recruited for one year of graduate study in public health and health education at the School of Public Health, University of North Carolina, and North Carolina College in Durham.

In addition, considerable joint health education program planning has been carried out with other divisions of the North Carolina State Board of Health, allied official and voluntary agencies, and organizations at the local and state levels.

Basic problems encountered by the Division of Local Health Administration during 1947 in expanding local public health services to the people of North Carolina have been the following:

1. Serious shortage of qualified professional personnel—particularly health officers and nurses.

2. Serious need for additional financial support from local and state sources.

3. Need for increasing salaries so as to be more commensurate with the training and experience requirements of professional personnel particularly at the state level.

VENEREAL DISEASE EDUCATION INSTITUTE

Mr. Capus Waynick, Director

During the year, the work of the Venereal Disease Education Institute has continued with funds supplied especially for its budget by the U.S. Public Health Service. The Institute's activities have been in the hands of a very small staff, directed by Capus Waynick. The educational ideas developed in the Institute

have been published by the North Carolina Social Hygiene Society, a non-profit cooperation, and made available to local health officers in the State without cost to them. The demand for these materials has been growing, as health educators have increased in the work in the field.

REYNOLDS RESEARCH LABORATORY

**Harold J. Magnuson, M. D.
Research Professor of Syphilology**

Research Activities. As indicated in previous reports the major activities are directed toward solution of basic problems in the field of experimental syphilis. A quantitative investigation of the rate of development and the degree of acquired immunity in experimental syphilis has been completed and has been the subject of reports by Dr. Magnuson at Venereal Disease Control Seminars held in Detroit, Michigan on September 17, 1947, Jackson, Mississippi on October 13, 1947, and Boise, Idaho on November 20, 1947. A preliminary report on this same work was presented at the symposium, Recent Advances in the Investigation of Venereal Diseases, held in Washington on April 17, 1947, under the auspices of the Syphilis Study Section of the National Institute of Health. This same basic problem is to be the subject of papers presented by Dr. Magnuson, and Miss Rosenau at the Society of American Bacteriologists meeting in Minneapolis on April 10 to 14, 1948, and at the meeting of the American Venereal Diseases Association in Chicago on June 20 to 21, 1948. The work will also be presented at the symposium, Recent Advances in the Study of the Venereal Diseases, to be held in Washington, D. C. on April 8 to 9, 1948.

Work has been completed and published in two other phases of experimental syphilis.

1. "The Minimal Infectious Inoculum of *S. pallida* (Nichols Strain), and a Consideration of its Rate of Multiplication in Vivo", by Harold J. Magnuson, Harry Eagle and Ralph Fleisch-

man, which appeared in the American Journal of Syphilis, Gonorrhea, and Venereal Disease, Volume 32, January 1948.

2. "Attempted Immunization of Rabbits against Syphilis with Killed *Treponema pallidum* and Adjuvants", by Harold J. Magnuson, Seymour P. Halbert, and Barbara J. Rosensu, which appeared in the Journal of Venereal Disease Information, Volume 28, December 1947.

The work on the treatment of asymptomatic neurosyphilis in the white mouse is to be the subject of a report presented at the Society of Investigative Dermatology to be held in Chicago on June 20, 1948.

Additional papers which are now in press, for which reprints are not yet available include: "The Rate of Development and Degree of Acquired Immunity in Experimental Syphilis", by Harold J. Magnuson, Barbara J. Rosenau, and John W. Clark, Jr., "Biawuth Plus Penicillin in the Treatment of Experimental Syphilis", by Harold J. Magnuson, Barbara J. Rosenau, and John W. Clark, Jr., "The Studies of Antibiotic-producing Strains of *Escherichia coli*", by Seymour P. Halbert, and Harold J. Magnuson. "The Relation of Antagonistic Coliform Organisms to *Shigella* Infection. I. Survey Observations", by Seymour P. Halbert.

Teaching Activities. As before, the director of the laboratory has taught courses in Venereal Disease Control for Physicians, Public Health Nurses and Health Educators in the School of Public Health, at the University of North Carolina, Chapel Hill, North Carolina. He has participated in the post graduate education at the Durham Rapid Treatment Center, Durham, North Carolina, and has participated in the various Venereal Disease Control Seminars held by the U.S. Public Health Service throughout the country.

Administrative Activities. During the fiscal year 1947-48 this laboratory has been operating as co-operative project supported by the State Board of Health, the University of North Carolina and

U.S. Public Health Service. Personnel has been supplied by the U.S. Public Health Service, and a portion of the operating funds and quarters by the University of North Carolina and the remainder of operating funds by the North Carolina State Board of Health. In addition there has been available a Research Grant from Research Grants Division of the National Institute of Health. As of July 1, 1948 this laboratory will be greatly enlarged by taking over a portion of the functions now assigned the Laboratory of Therapeutics at the John Hopkins School of Hygiene and Public Health. This enlarged laboratory will be located in a new building, plans for which are nearing completion. At that time personnel of the laboratory will be expanded from 10 to approximately 30 persons. Including among these will be chemists of outstanding ability who will contribute much to the research program and the prestige of this laboratory.

DIVISION OF EPIDEMIOLOGY and VITAL STATISTICS

C. P. Stevick, M. D., Acting Director

The morbidity and mortality statistics prepared by this Division again provided important information regarding the health of the population of the state during 1947.

The communicable disease causing the most deaths in North Carolina is still tuberculosis; however certain encouraging trends are apparent with respect to this disease. The provisional 1947 mortality rate for pulmonary tuberculosis is 25.4 deaths per 100,000 population as compared to the 1946 provisional rate of 27.9. There has been an extensive improvement in tuberculosis case-finding as is reflected by a 100 per cent increase in morbidity reports since 1944. At that time the morbidity rate was 48 cases per 100,000 population. It increased to 96.6 in 1947. A third encouraging trend with respect to this disease is the improvement in the rate of minimal to far-advanced active cases diagnosed. In 1947, of the

2,059 active cases reported, 16 per cent were in the minimal stage as compared to 14.7 percent in 1945.

Gonorrhea and syphilis remain the largest single causes of morbidity among the reported communicable diseases. Here, too, however, an encouraging decline occurred in 1947. The gonorrhea morbidity rate has been rising steadily in this state as reporting and case-finding have improved. Ten years ago the reported gonorrhea morbidity rate was 82 cases per 100,000 population. This rate increased steadily to a peak of 421 in 1946. The past year shows the first sizable decline that has taken place during this period with the rate falling to 381. Syphilis morbidity reports rose steadily for many years until 1939 when a peak rate of 877 cases per 100,000 population was reported. Following that year syphilis morbidity declined annually until 1946 when a definite increase occurred. That rate was 242. In 1947 the rate declined to 235. Whether or not this decline represents a renewal of the downward trend in syphilis morbidity, interrupted by demobilization, remains to be seen.

Pertussis continues to lead diphtheria as a cause of death; however, the downward trend in the mortality rates for these diseases persisted through 1947 and brought record lows for both. Diphtheria morbidity rose slightly in 1947, but pertussis morbidity was the lowest recorded since 1936. This gratifying situation is probably due, in large part, to an increase in the number of pertussis immunizations performed throughout the state, a fact which derived a stimulus from the enactment of the state-wide whooping cough immunization law in 1945.

Typhoid fever cases reached a new low, amounting to only 47 in 1947. This disease has declined without interruption since 1935 and is a good index of the improving situation with regard to environmental sanitation throughout the state.

An interesting decline in scarlet fever morbidity has taken place during the past two years. Prior to 1945 the rate

fluctuated between 60 and 80 over a period of at least ten years without any tendency to decline. In 1945 the rate was 85 cases per 100,000 population. In 1946 the rate dropped to 40, the lowest ever recorded. In 1947 the rate dropped still further to 31. The widespread use of chemotherapy in the population may have been a factor in this decline. The hazard of war-born malaria and amebic dysentery appears to be steadily diminishing. While reports of malaria in veterans are being received, the over-all recorded malaria morbidity rate declined from 9.6 cases per 100,000 last year to 3.7 this year. The morbidity rate for amebic dysentery remained unchanged at 0.5 cases per 100,000 population.

The year 1947 brought the third largest number of cases of poliomyelitis ever recorded in the state. The previous totals were 675 cases in 1935 and 861 in 1944. The 1947 total was 300; however, the 21 deaths reported to date for 1947 exceeded by only three the deaths for 1946, during which year only one-half the number of cases was reported.

Three other diseases which caused a rise in morbidity in 1947 are Rocky Mountain spotted fever, tularemia, and undulant fever. Rocky Mountain spotted fever cases totaled 88, the largest number ever recorded. The provisional report of mortality for this disease shows 17 deaths as compared to 21 for the previous year. Apparently, the new therapeutic development largely overcame the increase in morbidity. There were 74 cases of tularemia reported in 1947. This total also represents a new high. Undulant fever cases rose to 21. According to death certificates received to date for 1947, there has been no increase in mortality from these latter two diseases.

Of the non-communicable diseases, cancer and diseases of the cardiovascular-renal system are still on the increase. In this connection, it is necessary to outline the changes that are taking place in the age of our population. In the fifty-year period ending with the 1940 census, the portion of the

population above age forty increased from 19 percent in 1890 to 24 per cent in 1940. With the great decline that has occurred in the preventable diseases and with the larger portion of the population subject to diseases of advancing age, our rising cancer and cardiovascular mortality rates are clearly understandable and are a by-product of the increasing life expectancy. In view of this situation, it is entirely possible that as the disease we now know to be preventable are reduced still further and as the degenerative diseases increase with the increasing age of our people, the crude death rate for North Carolina will begin to rise and later become stabilized at considerably above its present level. As a matter of fact, this may be coming about at the present time. The provisional crude death rate for 1947 is 7.8 as compared to 7.6 for the previous year. With better control of cancer the cardiovascular diseases will be responsible for a still greater number of deaths. The heart disease control program begins to appear not so much as an eradication problem as merely an attempt to change the age pattern, thereby reducing the incidence below age 75. One factor that will temporarily slow this aging process is the post-war rise in our birth rate. This increase has probably reached its peak with 1947, which saw the arrival of over 113,000 infants and gave us a provisional birth rate of 29.3 births per 1000 population, the highest since 1925.

Other changes of interest have occurred in our mortality picture. The provisional maternal mortality rate has reached the new low of 1.8 deaths per 1000 live births and the infant mortality rate has dropped to 35.4.

Automobile accidents declined slightly in 1947; however, other accidents showed a moderate rise.

Pneumonia has continued the downward trend that has persisted each year for over ten years. The rate ten years ago was approximately 77 deaths per 100,000 population. The 1947 rate is approximately 33.8.

Malaria Control. The Malaria Control Unit of this Division continued the regular blood slide surveys on a somewhat smaller scale. In the two counties covered, Brunswick and Pender, 5,763 slides were taken from school children through the first six grades.

The large scale construction of new ponds continued as a result of the promotion efforts on the part of the U.S. Soil Conservation Service. That Service is cooperating with the North Carolina State Board of Health in requiring that each person who solicits their aid in building a pond must obtain a permit from us before such aid will be given. During the year 737 pond inspections were made and permits were issued for 312 new ponds. Applications were received for several hundred additional permits for pond construction, but the permits are being withheld by us until the owners get the pond sites cleaned up in accordance with our regulations.

With personnel, equipment, and materials furnished by the United States Public Health Service, the DDT residual spraying program was continued in areas found to be malarious by blood slide surveys or other epidemiological data. Even though funds provided by the United States Public Health Service decreased under those provided for 1946, more homes were sprayed as local contributions more than offset the decrease. A total of 58,091 homes was sprayed. Funds have been provided by the Public Health Service to continue this program during 1948.

An additional activity was taken on by the Unit during the year. With the sum of \$5,000 provided from the General Health Fund, demonstration fly control projects were conducted in ten counties located west of the area in which the malaria control program is operated. The Unit now has facilities for mixing DDT concentrate and selling it to local health departments at actual cost. It is anticipated that fly control programs will increase during the next year with the material available at such a low cost.

FIELD EPIDEMIOLOGICAL STUDY OF SYPHILIS

John J. Wright, M.D., Director

The Field Epidemiological Study of Syphilis was set up in 1940 to follow the trends in syphilis over a period of time.

The primary purpose of the Study is to determine the effectiveness of the methods of syphilis control being used in the study area. Data has, therefore, been continuously gathered to provide a base line of information regarding syphilis in the various population groups in the study area by color, age, sex, marital and socio-economic status. The effectiveness of control methods can, therefore, be measured by changes in the attack rate, discovery rate, and prevalence rate.

Because of the problems involved in carrying on such a study on a state wide basis, two study areas were selected: the Orange - Person - Chatham Health District, which is a typical rural area, and the Durham City - County Health District, which is a typical urban area. The population covered is roughly 160,000 over an area of 1792 square miles. It was felt that what was happening in these areas should be fairly typical of the State of North Carolina as a whole.

During 1947, a number of important developments took place in the Study. It was felt that sufficient data had been accumulated since the inception of this investigation to merit a detailed analysis—one which, in addition to shedding some light on a series of special aspects of syphilis control such as the effect of the war, penicillin therapy, etc., would also provide a reliable base line of data regarding attack and prevalence rates of syphilis with which data to be obtained henceforth could be compared. This letter is the basic investigation which occupies the bulk of the time of the Study staff.

The preparations for this type of detailed analysis involved among other things:

1. The completion, correction and

cross-checking of all records for errors, duplication, etc.

2. The amalgamation of the serological and case registers into one master file consisting of an index card for each individual on whose status with relation to syphilis any information has been obtained.

3. Technical arrangements for the use of International Business Machines equipment so that index card data could be analyzed adequately and efficiently.

In August, the Study had the benefit of a visit from Dr. Persis Putnam, of the Rockefeller Foundation, who spent two weeks in the Study headquarters assisting in working out coding and other necessary statistical details involved in the preparations for the analyses of the accumulated data relating to the incidence of syphilis in the years under study.

In order to expedite the completion of the clerical tasks involved in the above described analysis, the clerical staff was enlarged by the addition of one clerk on a permanent basis and two clerks on a temporary basis. Greatly enlarged quarters at the School of Public Health were obtained to house the enlarged staff, the files and the IBM equipment.

Special efforts were also made to complete and cross check for error and duplication the data for the study of syphilis among pregnant women in the Orange-Person-Chatham area. This is now almost ready for mechanical processing and statistical analysis.

In addition, there are a number of special studies under way:

1. An evaluation of the effectiveness of the epidemiological procedure in syphilis case finding.

2. An attempt to ascertain the influence of the armed services VD education program as reflected in our data.

3. The development of objective yardsticks for the measurement of the effectiveness of the VD control program in local health departments.

The Director of this Study since its inception became Professor of Public

Health Administration at the School of Public Health, of the University of North Carolina, on July 1, 1947 thus making it necessary to obtain the services of another physician to carry on the day to day work of the Study. On October 1, 1947, Dr. Cecil G. Shops, therefore, assumed the position of Assistant Director of the Study with the Director being available to give the Study constant guidance and direction.

The staff has continued with its teaching activities with special emphasis on the value of the epidemiologic approach and method. These include educational activities among the health officers of North Carolina at special institutes, among public health nurses in local health departments, and at the School of Public Health of the University of North Carolina.

The staff also cooperates with the Rapid Treatment Centers of the State and participates in their program in an organized fashion.

Preliminary analyses of our data in previous years have indicated that the syphilis control program has been most effective thus far in finding the latent and late cases of syphilis. These constituted the great backlog of old syphilis cases amongst which developed the cases of neurosyphilis, cardiovascular syphilis and congenital syphilis. This reservoir in our population from which stemmed the serious complications of syphilis is being eliminated. These same analyses have also indicated, however, that the attack rate of syphilis in the study area—the number of newly acquired cases per 1000 population—has not declined over the years. As a matter of fact, there is evidence that there has been an increase in the past few years. This is the hard core of the syphilis control problem—the prevention of the spread of syphilis by finding the infectious cases. The treatment of these cases has, of course, been greatly simplified with the advent of penicillin therapy. The basic problem remains that of finding the infectious cases as early as possible.

Reference was made in the report for

the year 1946 to a preliminary study of the reasons which brought patients with syphilis to recognition and treatment. This study has since been simplified. The findings show clearly that education and contact tracing are by far the most important case finding measures being used. Out of a total of 1033 primary and secondary cases of syphilis, both white and colored of both sexes, diagnosed by clinics in Durham in the years 1943-1947 and in Orange-Person Counties in 1941-1947, 834 or 80.7% were brought to treatment because they were known contacts of other cases or because they reported voluntarily due to suspicious lesions or symptoms. Of the total of 541 females in the above groups of infectious cases, 274 or 50.6% were brought to recognition and treatment as a result of contact tracing alone. It is hoped that this and the other analyses of our accumulated data which are at present under way will be of some assistance in the continuing search for the most efficient and effective syphilis control program.

During the first years of the Study, principal emphasis and effort was directed toward accumulation of reliable data by which the effectiveness of the measures used in the control of syphilis might be evaluated. Much reliable data has been accumulated in these years. The channels for the accumulation of these data have become well established through the combined efforts of all the personnel in the Study. The rapport established by the staff members with the sources of data, now enable its accumulation with minimum effort so that principal emphasis and effort of the entire staff can now be directed toward the processing and analysis of these data so that they will soon be ready for publication and will provide an accurate and adequate base line upon which to build continuing studies.

DIVISION OF SANITARY ENGINEERING

Mr. J. M. Jarrett, Director

Introduction. The following is a brief summary of the work done by the per-

sonnel of the Division of Sanitary Engineering during the calendar year, 1947. Since more detailed reports have been submitted monthly to the State Health Officer and members of the State Board of Health, this report will summarize very briefly the various activities and accomplishments during the year.

Administration. Because of the change in personnel which continued to take place during the year 1947, as it had in previous years during and following the war, it was necessary to readjust the working arrangements of the personnel of the office to accomplish the most results with the few number of persons we had; however, in July we reorganized the administration of the office, in certain respects, making it more compact, and also capable of performing specific duties. Our personnel problems had also adjusted themselves, to a great extent, by the first of July which made it possible for us to work out a better organization than we have had at any time during the period of my direction of the Division.

In reorganizing the work in July, it was possible to place an engineer in charge of each of our two main units; one in Engineering and the other in Sanitation. This groups all of our engineering activities under one head, and all of our sanitation activities under one head. The main reason for doing this was to make it possible, as time goes on, for our District Sanitarians to function more efficiently in their districts by allowing them to handle all sanitation activities, rather than specialized activities, as has been the procedure in the past.

Considerable time was spent by the engineers in continuing the work started in 1946 which was designed to amend or improve our Water Works Laws, and also toward securing legislation governing the sanitation of swimming pools. We were not successful in our efforts, however, and both of the bills relating to Sanitary Engineering were killed by the Legislature. Considerable

time was also spent in connection with proposed legislation giving the State Board of Health authority to establish minimum standards for the sanitation of milk supplies. This also failed to pass the Legislature.

In addition to the time devoted to re-working State legislation, a considerable amount of time has been given over to reviewing and rewriting the present regulations which have been adopted by the State Board of Health relating to the various sanitation laws. The need for this has been brought about by changing conditions, as well as our recognition of certain errors which have been contained in these regulations, and which have not been corrected over the past years.

Engineering. During the year, the cooperative program with the U. S. Geological Survey, which was inaugurated in 1946, has continued to function and considerable work has been done on the analyses of public water supplies. The work consists of complete chemical analyses, and is a supplement to the work being done by the State Laboratory of Hygiene on the bacteriological examination of water supplies.

Work was begun on stream sanitation activities during the year when personnel was employed by the State Stream Sanitation and Conservation Committee. This work is closely related to the work of the Division of Sanitary Engineering, and offices have been provided the workers of the Stream Sanitation Committee in our office. A sanitary survey was begun of the Neuse River, which will be used to help the Division in its work with the town of Smithfield and the city of Raleigh.

The engineers also continued their program of cooperation with the State Planning Board, municipalities, and consulting engineers in connection with the advance planning of public works through the Federal Works Administration program. The towns applying for grants for advance planning are listed in the appendix to this report.

A number of special investigations were also carried on by the engineers

of the Division relative to the location of well sites for new public water supplies, assistance to plant operators and superintendents on operating problems, special waste disposal problems, particularly those dealing with industrial wastes, special investigations with State institutions, and assistance to the Medical Care Commission in the inspection of existing hospital facilities and the approval of proposed hospital sites. Routine work was also carried on in connection with public water supply and sewage disposal systems, insofar as time would permit. More attention is being given to the operation of these facilities, now that we have a more complete staff of District Engineers.

Sanitation. The problem of milk sanitation seemed to be outstanding in our program of work for the year 1947. Considerable time was devoted to the completion of surveys, compilation of data, meetings with the State Department of Agriculture, State Grange, Dairy Products Association, Dairy Producers Association, and other groups interested in milk production and sanitation, during the first three months of the year. As reported last year, this work was started the latter part of 1946 for the purpose of securing information which could be used in presenting requests for legislation, if it were deemed advisable to do so. The milk bill which we sponsored was killed by the Legislature, as previously mentioned, and a working arrangement set up between the State Department of Agriculture and the State Board of Health. Surveys are being made by this office, as per our working agreement with the State Department of Agriculture, and this information is being supplied the Department of Agriculture as rapidly as possible.

One thing which was brought out by our survey that was started in 1946, and completed in 1947, was the fact that very little, if any, adequate laboratory facilities are provided on the local level in connection with the milk program. Since this appeared to be one

of the greatest weaknesses in the public health program of milk sanitation, a program was started in the latter part of 1947 in cooperation with the Division of Local Health Administration to establish area laboratories. Some progress has been made on this, but not as much as we should like to have seen.

We are continuing to promote the adoption of local ordinances, and during the year either new or revised ordinances were adopted by the following county or district health departments: Anson-Montgomery; Catawba-Lincoln-Alexander; Cherokee - Clay - Graham; Cumberland; Stokes - Yadkin - Davie; Duplin; Edgecombe; Halifax; Hertford-Gates; Onslow-Pender; Orange-Person-Chatham-Lee; Pitt; Richmond; Rowan; Sampson. As of December, 1947, there were 79 counties covered by county-wide Milk Ordinances; 15 cities having local ordinances, leaving only nine counties in the State in which there is no milk control work, as of December, 1947.

During the year, ten new pasteurization plants were constructed and placed in operation. The usual amount of assistance was given the local health officers and their sanitation staff in connection with milk sanitation problems.

Plans were made during the year for the establishment of better organized and more effective foodhandling courses. A number of these have been given throughout the State, and it is the plan of the Division to continue this very important activity.

Considerable time was devoted during the year, as has been previously mentioned, in the revising of regulations formally adopted by the State Board of Health. Particular emphasis was placed during the year on Summer Camp Regulations, Hospital Regulations, and the rewriting of the regulations pertaining to meat markets, abattoirs, poultry plants, and frozen lockers. Frozen lockers and poultry plants have not been included in the Abattoir Regulations in the past, but upon request of the association representing these two industries, an effort

has been made to prepare regulations for control of sanitation in these places.

for control of sanitation in these places. The usual amount of time has been given to assisting local health departments in the training of sanitation personnel and in the selection of sanitarians for employment by the local health departments.

The shellfish sanitation work has progressed very nicely, a couple of check surveys having been made by the U. S. Public Health Service of those plants shipping in Interstate Commerce.

Considerable assistance has been given by the District Sanitarians of this office to the restaurant or foodhandling industry in connection with the preparation of plans and layouts for the construction or remodeling of public eating places. This work has been time consuming, but has brought forth considerable results.

Typhus Fever Control. This program which has been carried on as a separate activity, since it was financed primarily by Public Health Service funds and working under the direct supervision of the Public Health Service in Atlanta, was more closely tied-in with the other engineering activities. Because of the reduction in appropriations, it has not been possible to expand the program as we should like to have done, but the work which has been carried on has been most satisfactory and acceptable to the citizens of the towns where projects were operated. A tabulation of the towns covered and the amount of work done are included in the appendix.

Bedding. This program has been carried on in a routine manner, as in the past years. Two sanitarians are now employed on this work, and they devote their full time to this activity.

A numerical summary of inspections and visits made by the personnel follows:

Sanitation

Food handling places inspected
(cafes, restaurants, lunch and
drink stands) ----- 2329

Abattoir and meat processing plant inspections 249

Meat market inspections	817
Frozen Food locker plant inspections	28
Poultry Plant inspections	12
Plans prepared & reviewed food handling establishments	215
Food handlers' schools	12
School lunchroom inspections	115
Itinerant restaurant inspections	227
Private water supply inspections	104
Private sewage disposal inspections	221
Privy inspections	229
Summer camp inspections	29
Prison camp and jail inspections	25
Institutions inspected	41
Hospital inspections	30
Institutions inspected	
(educational)	7
(training schools)	3
Public School inspections	111
Swimming pool inspections	30
Hotel inspections (hotels and tourist homes & camps)	223
Bus station inspections	6
F.H.A. applications processed	559
Special investigations	184
Special meetings	238
Complaints investigated	59
Prosecutions	9
Shellfish plant inspections	1305
Retail seafood market inspections	365
Shellfish plant plans prepared	7
Patrol inspections of restricted waters	18
Milk	
Milk Plant inspections	338
Dairy Farm inspections	1603
Sets of local records checked	43
Surveys completed	50
Milk plant plans reviewed	36
Laboratory inspections	35
Milk samples collected	1038
Engineering	
Public Water Supplies	299
Institutional Water Supplies	37
Public Sewerage Systems	139
Institutional Sewerage Systems	64
Railway Watering Points	40
Plans reviewed and approved	124
Plans prepared	51
Special investigations	53
Sand analyses	10

Industrial waste problems investigated	13
Water samples (bacteriological)	64
Water samples (chemical)	149
New Well sites investigated	27
Hospital sites	80
F.H.A. investigations	26
Garbage disposal inspections	23
F.W.A. Advance Planning—Water & Sewerage, 1947:	
No. of applications	28
No. Towns	14
Cost—Water	\$1,963,556.63
Cost—Sewage	5,112,310.00
Adv. Requested—Water	63,027.45
Adv. Requested—Sewage	170,594.36

Typhus

Ratproofing:	
Establishments Ratproofed	1409
Total cost of Ratproofing	\$83,960
DDT Dusting:	
Premises treated	55,595
Lbs. DDT used	62,172
Bedding:	
Retail places inspected	2553
Manufacturing plants inspected	2920
Pieces of bedding condemned	5390
Prosecutions	5

DIVISION OF ORAL HYGIENE

E. A. Branch, D.D.S., Director

At this time, when the health needs of the people are being more widely discussed than at any time in history, it gives us satisfaction to know that we have a well established dental health program, based on proven needs and giving the maximum of service, in relation to personnel and expenditures, to the group destined to receive the greatest benefit from the service. In the existing confusion of plans and suggestions as to the real problem and ways of solving it, it is good to have a program in operation which stands the test of criteria now being advocated.

In substantiation of this, we wish to quote two statements from recommendations made by the Council on Dental Health of the American Dental Association and approved by that body. The first statement is:

"So long as nearly all of the popula-

tion over three years of age need periodic dental treatment, an organized dental care program for all age groups will remain an impossibility unless more personnel is trained and distributed more evenly in the population."

The second statement is:

"The prevalence of dental diseases can be reduced most effectively by concentrating on the dental needs of children."

This last statement of policy is especially acceptable as that has been for many years the major premise for justifying the direction of its program by the Division of Oral Hygiene to preschool and elementary school children.

We all consider the child our greatest asset. One of our most cherished and loudly proclaimed principles is that every child born in North Carolina should have an opportunity to develop physically and mentally to his full capacity. We all agree that a child with any physical defect is a handicapped child and that a handicapped child does not have an equal chance in the world of keen competition that exists today. When I tell you that tooth decay is the most prevalent physical defect you will realize the importance and value of the dental program.

You are all familiar with the modus operandi of the program. The school dentists go into the schools where they teach mouth health in the classrooms, make oral inspections for all children and dental corrections for the underprivileged, and refer the others to their own dentists for examinations and treatment. Since our last report the seven State school dentists have visited 388 schools. In addition to their teaching, they have inspected the mouths of 56,661 children and have made the necessary dental corrections for 22,836 underprivileged children. The need is for seven times seven dentists to do this work. Of course, it will be many years before such a goal can be reached, but we hope that by this time next year our staff will be doubled. It is encouraging to note that, in this respect, we are now going in the right direction,

with one recent addition to our staff and prospects of securing others.

To compensate in a measure for the necessary curtailment in corrective services, efforts have been made to make the educational services more effective and widespread. We have been glad to note and comply with the increasing requests from teachers all over the State for our dental health teaching materials.

An interesting and gratifying development in our educational program is that it has reached the age and stage at which dividends from the work of former years are being realized. Many of our young teachers and parents were "raised on" the program, and the children in their grades and homes are benefiting from the teaching of school dentists fifteen years ago. It has been said many times that ours is a long time program. We are entering on the era to which we have been looking forward—when the babies' and children's teeth reflect in their very structure and care the information and habits their mothers acquired in the elementary grades.

STATE LABORATORY OF HYGIENE

J. H. Hamilton, M.D., Director

The work of the State Laboratory of Hygiene for the calendar year, 1947, approximates in many respects the work done in 1946 which in our last report was compared to the year 1941—the year in which our peace-time services to the medical profession and the public health program reached its largest volume.

Historically, the sanitary examination of specimens of water from supplies selling water is significant. The General Assembly of 1907 which established the State Laboratory of Hygiene as a State Institution appropriated \$2,000 and enacted a schedule of fees which should be charged. This Act established the precedent which has continued through the years that the laboratory must be partially self-supporting. Each year since then receipts from the water examination fees and the sale of prod-

ucts and supplies has paid from one-third to one-half of the cost of operating the laboratory. These water examinations represent the only routine service of the laboratory for which a charge is made. During 1947—8,091 specimens of water were examined for evidence of bacterial contamination as compared with 8,063 for 1946.

The total number of examinations for 1947 were 477,410; whereas, in 1946 there were 484,068. Serological tests for syphilis make up the largest number of specimens in any classification. During 1947—391,261 of these tests were performed—2,644 of which were specimens of spinal fluid. In 1946—403,409 serological tests for syphilis were made. During the year facilities were provided for the making of titered serological tests for syphilis on patients who had received Penicillin treatment by private physicians and infants who were suspected of having congenital syphilis. During the closing weeks of the year a study was started in the hope that we could determine the effectiveness of cardiolipin antigens in the detection of false positive tests which occur altogether too frequently with the antigens which are ordinarily used.

To aid in the diagnosis of typhoid fever—3,587 specimens of blood were cultured. Typical organisms were found in 41 of these specimens. In 1946—3,097 blood cultures were made with typhoid organisms being found in 34. There were 1,460 specimens of feces cultured for typhoid, primarily for the detection of carriers, with positive cultures being reported in 77 of these. In 1946 an even 1000 cultures were made on feces and urine—the organisms being isolated in 55 instances. Agglutination tests for typhoid were made on 4,407 specimens of blood with 30 positive reactions. In 1946 there were 3,880 specimens and 34 positive reactions.

The agglutination tests for Undulant Fever were 3,751 in 1947 with 44 positive reactions. In 1946 we examined 3,179 specimens with 19 positive reactions.

The requests for Tularemia tests decreased from 2,468 in 1946 to 1,853 in 1947, although more positive reports were made—94 in 1947 than the 77 positive reports in 1946.

More requests were made for Weil Felix Agglutination Tests for the Rickettsial infections than for any other test of this type—there being 7,496 tests in 1947 and 6,346 in 1946 with 77 positive reports in 1947 and 103 in 1946.

The incidence of rabies as evidenced by the number of animal heads sent to the laboratory for examination is slightly higher than it was in 1946, 1,009 animal heads being examined in 1947 with 344 showing evidence of the disease as compared with 921 examinations in 1946 with typical findings in 322. The number of antirabic treatments needed to protect persons with actual exposures was 803 in 1947 and 798 in 1946.

Although we had more diphtheria reported in 1946 than we had in 1947, the laboratory examined more specimens for diphtheria in 1947—4,977 as compared with 4,515 in 1946 with typical organisms being found in 623 in 1947 and in 438 in 1946.

From the standpoint of the State Laboratory of Hygiene there seems to be less gonorrhea in 1947 than in 1946 since our microscopic examinations decreased from 14,428 in 1946 to 10,467 in 1947 with organisms of typical morphological and staining characteristics being found in 1,491 in 1947 and 2,032 in 1946. Almost identical numbers of gonococcus cultures were made by the delayed culture method in each of the years—1,646 in 1947 and 1,642 in 1946 with 444 positive examinations in 1947 and 421 in 1946.

For tuberculosis we examined 10,291 specimens of sputum in 1947 as compared with 8,680 in 1946, characteristic organisms being found in 1,337 of the specimens in 1947 and 1,189 in 1946. During the year we started a study in which cultural procedures are used for patients which gave a typical X-ray findings. The entire time of one well trained bacteriologist is devoted to this

work. She has completed cultures on 214 specimens.

A considerable number of specimens continue to be sent to the laboratory with the request that they be examined for Vincent's Angina—9,200 such specimens being examined in 1947 with 2,532 positives as compared with 10,103 in 1946 with 2,855 positive reports.

There has been a definite increase in the number of specimens of feces being sent in for examination for intestinal parasites—13,544 of these specimens were examined in 1947 with some type of intestinal parasite being found in 2,335. In 1946 there were 8,673 specimens examined with 1,310 showing some type of intestinal parasite.

For suspected meningitis—147 specimens of spinal fluid were sent in for examination in 1947. There were 164 specimens examined in 1946.

An even 2,000 miscellaneous examinations were made in 1947 as compared with 1,411 in 1946.

Of the biological products distributed by the laboratory typhoid vaccine continues to comprise the largest volume, there being 12,089—10cc vials; 3,482—50 cc vials and 2,464—100cc vials distributed in 1947. This is slightly in excess of the amount sent out in 1946.

During part of the year 1947 we had an embarrassing experience with our smallpox vaccine, two different lots being so low in potency that when it was shipped to remote places it failed to give satisfactory takes, although in the vicinity of Raleigh it was considered to be satisfactory. Arrangements were made for a different source of seed vaccine. The subsequent lots made from the new seed virus showed satisfactory potency. A sufficient amount of smallpox vaccine was sent out to vaccinate 237,339 people.

Of Pertussis Vaccine we distributed 15,773 immunizing treatments in 1947 as compared with 14,058 in 1946. Some of these immunizing treatments were made up in ten billion per cc concentrations and some in twenty billion concentrations. Both products apparently proved to be satisfactory with no

serious reactions or abscesses being reported.

There was a slight decrease in the amount of diphtheria toxoid distributed, but a marked increase in the amount of Pertussis Vaccine and diphtheria toxoid—5,298 packages of this product being distributed in 1946 and 12,362 in 1947.

The demand for combined Pertussis Vaccine - Tetanus Toxoid and Diphtheria Toxoid remains very slight—only 10 - 10cc vials being sent out during the entire year.

The 1947 demand for diphtheria antitoxin was approximately the same as it was in 1946. If we are to decrease the amount of diphtheria antitoxin needed for the treatment of diphtheria, we must immunize either with diphtheria toxoid or one of the combinations of diphtheria toxoid with Pertussis Vaccine or Tetanus toxoid. In the experience of the laboratory the use of the combined Diphtheria-Tetanus Toxoid product is decreasing rather than increasing.

Since the prevalence of measles determines the number of requests for Immune Serum Globulin, the decreased amount of this product distributed during 1947 is probably reflected in a decrease in the amount of measles reported in the State. Only 3,198 - 2cc vials and 14cc vials were distributed throughout the year 1947. Both this product and our supply of blood plasma are made available without cost to us by the American Red Cross. During 1947 we sent out 3,253 - 250cc packages and 5,975 - 500cc packages of blood plasma. As long as our supply lasts this plasma will be delivered free of charge to physicians and hospitals throughout the State with the understanding that they make no charge for the product. Physicians, however, may make a charge for the administration of either the plasma or the Immune Globulin.

Rocky Mountain Spotted Fever Vaccine is supplied to the laboratory without cost by the National Institute of Health. There is an increased demand for this product as evidenced by the

fact that in 1947 we sent out 5,757cc—whereas, in 1946—1,450cc were distributed.

The State Laboratory of Hygiene has continued to participate in the Evaluation Studies of Serological Tests for Syphilis conducted by the Advisory Committee of the United States Public Health Service. Our Mazzini Test which is currently used as our screen test on all specimens of blood gave a sensitivity rating of 77.0%—the control laboratory had a sensitivity of 77.1%. Our Mazzini specificity rating was 100%. The control laboratory was 100%. Our Eagle Complement Fixation test gave a sensitivity rating of 63.9%—and a specificity rating of 100% as compared with 70.9% and 100% for the control laboratory.

We have continued to supervise the local laboratories which have been approved for the making of serological tests for syphilis under the State Marriage Law and to determine the quality of their work by sending out specimens of sera for them to examine and report to us. By and large these laboratories are continuing to improve the quality of their work. Their number continues to increase—there now being approximately 100 of them. During the year these laboratories report that they have performed more than 362,500 tests. The number closely approximates the number of tests performed in the State Laboratory of Hygiene.

The State Laboratory of Hygiene Farm continues to be a very helpful part of our institution—both in the preparation of biological products and the production of small animals.

The Water Laboratory sponsored by the United States Geological Survey in conjunction with the Department of Conservation and Development and the State Board of Health is continuing to make satisfactory progress in its program for making complete chemical examinations for all the water supplies of this State.

Several special studies are being conducted in the Laboratory. Our principal difficulties have been financial. The

increase in the cost of supplies, materials, services and equipment have made it difficult to operate on the funds available, although our appropriations and receipts are both larger than they ever were before.

When we endeavor to look into the laboratory problems of the future we seem to see two rather definite needs; one of which, is the necessity of having more money with which to pay adequate salaries to well trained laboratory workers and the purchase of adequate supplies and equipment. The other definite need is for training facilities for laboratory workers. The rapid development of local Laboratories will be accelerated when the Construction Program of the Medical Care Commission nears completion. Already we have a shortage of well trained laboratory workers in the State. Our colleges by and large offer little training in the field of bacteriology. It would, therefore, seem desirable that the State Health Officer and the Director of the Medical Care Program endeavor to persuade our colleges to offer to their students fundamental training in bacteriology and allied subjects. It is desirable that some arrangement be made which will enable recent graduates from our colleges to secure well-rounded experience—a plan is needed comparable to internship for the graduates from our medical schools. Unless we provide for a supply of adequately trained laboratory workers, our new laboratories will be of little benefit to the people of the State.

One of the public health laboratory procedures for which there is likely to be an increased demand is for the laboratory examination of milk. Plans for increasing this service are already underway. It is probable that in the future more and more dependence will be placed upon laboratory examination of milk, since we are likely to have a vast increase in the number of small milk producers and a decrease in the number of large dairy farmers. It would seem that the farmer having four or five cows, the number depending upon

the size of the farmer's family, will replace to a certain extent the dairy farmer who has from fifty to one hundred cows and who must depend upon hired labor. An increase in the number of small producers makes inspection by the sanitarian more difficult. It is easy for a sanitarian to visit ten - fifty cow dairies—it is exceptionally difficult for a sanitarian to inspect one hundred - five cow dairies. The laboratory can step up its work without such marked increase in expenses.

There are probably other laboratory problems which will be perplexing. The laboratory workers of the State, particularly those of the staff of the State Laboratory of Hygiene, are anxious to play their part in making North Carolina a better place in which to live.

SCHOOL-HEALTH COORDINATING SERVICE

C. P. Stevick, M.D., Co-Director

Charles E. Spencer, M.A., Co-Director

The North Carolina School - Health Coordinating Service sponsored jointly by the State Board of Health and the State Department of Public Instruction has adopted a policy of making the services of the staff available to the state as a whole, on a consultation basis rather than on a demonstration basis to a small area each year.

The health and physical education activities have been directed as usual toward setting up or improving the health instruction programs of the public schools of North Carolina. Particular emphasis is given to the functional type of instruction which, when properly carried on, will develop health habits, attitudes and understandings of children and thus enable them to accept their responsibilities for health maintenance and protection.

The staff members working in the areas of health education and physical education have given special attention to work with teachers in relating their instruction to children's needs and to the health services made available to them.

The methods used by the staff consisted of:

1. Preparation and distribution of teaching materials, standards, administrative suggestions and special health information of a current nature.

2. Holding conferences with superintendents, principals and health department personnel.

3. Providing assistance in health and physical education workshops for teachers on the elementary, high school and college levels.

4. Conducting demonstration teaching to pupils and teachers.

5. Visiting schools to make surveys of needs and to make recommendations, and upon request working with individual teachers.

6. Attending special health education conferences and meetings held by various local and state health and education agencies and organizations.

7. Cooperating with other divisions of the State Board of Health and the State Department of Public Instruction.

8. Work with special groups in the development of curriculum material for local use and for adaptation by other schools of the State.

9. Working with superintendents, principals and teachers in procedures designed to improve the buildings, grounds, sanitation and other health facilities and equipment.

Since the services of the staff have been extended theoretically to the whole State, materials of instruction and bulletins have been prepared and distributed to all the city and county schools. Three bulletins were prepared and distributed to the special teachers of health and physical education.

During 1947 the staff spent from 1 day to 3 weeks in 33 county and 25 city school units.

A consultant in Mental Hygiene joined the staff on September 15, 1947. From that time until December 31st he was mainly occupied in library research at the University of North Carolina and in acquainting himself with personalities within the State. From October 15th through November 8th the Con-

sultant visited with leaders in mental health work in Maryland, Delaware, and New York City. Services were made available to schools as of January, 1948 for in-service teacher training and to develop teaching materials in the field of mental hygiene.

During the early part of 1947 in-service training of teachers in the field of observation and screening of school children for physical defects was carried out in five counties. This was done in cooperation with school and health department administrators and by means of group and individual instructors, films and literature.

Following the completion of summer school this same program was continued in four additional counties.

Hearing conservation activities were carried out in a somewhat different basis than previously. The staff nurse consultant was assigned to those areas making arrangements to begin permanent long range programs. The staff physician and nurse trained nurses and school personnel in the method of operating audiometer equipment. Assistance was given local departments in planning programs and in establishing the necessary administrative procedures. Audiometers were purchased by local civic clubs for seven counties and by the school system and the health departments in two additional counties.

The colored staff continued to operate as a unit with physician, nurse, health educator and nutritionist carrying out a joint program. This staff completed work in three counties which was started late in 1946 and finished a program in an additional county in the Spring of 1947 before taking up the operation of summer school at the North Carolina College.

Two Child Health Conferences were sponsored and conducted during the summer of 1947, by the School-Health Coordinating Service in cooperation with the University of North Carolina at Chapel Hill and North Carolina College at Durham.

These conferences were held for periods of six weeks. Six semester hours

of graduate or undergraduate credit were granted those who completed the work.

The work was conducted on a workshop plan with emphasis given to providing opportunities for the teachers to plan a functional program for the situation in which she or he expected to be the following year.

BUREAU OF NUTRITION

W. P. Jacocks, M.D., Director

The general plan of the Nutrition Division work, as described in previous reports, remained unchanged, except that more consultation service has been possible on account of the progress which has been made in the program in the past three years.

During the year, work was conducted through the health departments and schools in 13* counties. The amount of work which is possible in each area will be increased when a larger staff has been employed.

As in previous years limitations have been placed on the work because of the inability to employ and keep the necessary staff. Since the 1947 legislature made it possible to permit higher salaries, these difficulties should be lessened in succeeding years. There is provision in the budget for a director, a principal nutritionist and seven field consultants but it has not been possible to secure trained people as the available supply was exhausted this year before the salary increases were confirmed.

Members of the staff prepared and published three articles during the year.

Work With Nurses. Nutrition conferences were held at regular intervals during the year with public health nurses at state and county levels throughout the state. The smallness of the staff allowed only 24 such meetings in 1947 with 267 nurses attending. Among the subjects discussed at the

meetings were, the following: Results of surveys done with school children in different sections of the state; methods for presenting nutrition information to various groups of people; nutrition during pregnancy; and newer developments in the field of nutrition.

Work With Teachers. As previously, special assistance has been given to teachers upon request. Eight-hour refresher courses have been taught in the schools in counties where the consultants were working. Discussions of subject matter concerning the science of nutrition and information about methods of teaching this subject at the various grade levels has made up the content of the refresher courses. At least 578 teachers have voluntarily attended these courses. Following the course of instruction 509 teachers have requested specific help in class room teaching and have conducted nutrition units with their students as a part of their health teaching, including feeding experiments by using rats and guinea pigs.

Surveys. As a regular part of the nutrition program, dietary surveys were conducted in each new area of work to determine specifically the existing nutritional adequacies and inadequacies. The plan for conducting surveys has been described in previous years. During the year, 815 children were interviewed for survey purposes in 27 schools. The surveys revealed that the consumption of meat and meat substitutes, fats, sugar and cereals was high. The consumption of milk, citrus fruits, tomatoes, green and yellow vegetables was far below the needed requirements.

Clinics. The services of the nutritionists were made available in the Health Department clinics. Group discussions and individual instruction were used in the prenatal, well-baby, and preschool clinics. Other clinic patients were referred to the nutritionist by the doctor or nurse. Whenever possible, a simple demonstration of food preparation to illustrate a way of meeting some specific food needs was used in the group discussion. Sixteen group dis-

*Alamance, Guilford, Rockingham, Caswell, Rowan, Cabarrus, Mecklenburg, Gaston, Rutherford, New Hanover, Pender, Anson, and Scotland.

cussions and 358 individual conferences were held in clinics during the year.

The spastic demonstration nursery (clinic) was in operation in Charlotte for six weeks. The nutritionist met with the food committee and helped plan menus for the entire nursery. She visited the nursery twice a week and had conferences with the attending physician about giving the children thiamine and extra ascorbic acid. The menus were mimeographed and given to each mother; individual conferences were held with the mothers about food and its preparation for the children. Approximately 26 children attended the nursery.

Cooperation. One of the underlying principles of the Nutrition Division is its desire to cooperate with all official and non-official agencies which are interested in and which promote nutrition programs. Progress has been made towards this end, and cooperative programs are in operation or are planned with Woman's College, School of Public Health, School Lunch Program, Extension Division, State College, Welfare Department, Community Groups and the Federal Food Conservation Program.

Conclusion. The work during the year has been gratifying when the small number of workers is considered. One of the problems awaiting solution in 1948 is the building up of a full staff. With better salaries provided, this now seems to be practical and, as a consequence, the accomplishments in 1948 should be greater.

DIVISION OF INDUSTRIAL HYGIENE

O. J. Swisher, Jr., M.D., Director

Physical examinations and x-rays	553
Employees issued work cards	532
Employees recommended to be removed from dusty trades	19
Employees recommended for further sanatorium study	7
Employees with active tuberculosis	1
Companies visited for employee examination	7
Conferences attended	16

Case histories submitted to Industrial Commission	14
Supplementary case histories submitted to Industrial Commission	5
Court hearings attended	19
Special examinations and x-rays as requested by Industrial Commission	15
Diagnoses of the special examinations and x-rays:	
5 essentially Negative	
1 Chronic bronchitis and emphysema	
2 questionable Silicosis	
2 Silicosis, second degree	
1 Silicosis, third degree	
1 Asbestosis, second degree	
1 early Silicosis with More Fibrosis than Usual	
1 More Fibrosis than Usual	
1 Emphysema, base left lung	
Other physical examinations and x-rays	1
Orkin Exterminating Company, diagnosis Essentially Negative	
Examinations and x-rays in non-dusty trades	671

The following equipment has been purchased, which the Division ~~was~~ badly in need of in order to keep up with the increased work that ~~this~~ Division has attained this year:

1. 2 1946 two-door 5 passenger Ford sedans. These cars are being used by the Director and the Principal Industrial Hygiene Engineer.
2. An x-ray diffraction unit was installed in our laboratory for the purpose of securing the most reliable and speedier mineral analyses of toxic dust. Such equipment also furnishes a permanent record of amount of toxic dust present in a sample.
3. 1 Orthostereoscope.
4. 1 Radiographic Illuminator.
5. 1 Carbon Monoxide Detector.
6. 1 Exskta Camera with flash attachment.
7. 1 Almor Velometer, exhaust system set.
8. 1 Illumination Meter.
9. 2 Stop Watches.

10. 1 Electro - static dust and fume sampler.
11. 1 Carbon Monoxide Indicator.
12. 1 Combustible Gas Indicator.
13. 1 Benzol Indicator with purification chambers.
14. 12 Sampling Tubes for electro-static dust and fume sampler.
15. 3 pkgs. large standard impinger tubes and 2 pkgs. Dunn dust counting cells.
16. 1 toxic gas indicator.
17. 1 CRT rotating anode x-ray tube.
18. 1 U.S. Standard Physician's Diagnostic Scale.
19. Midget Impinger.
20. 1 4 - panel fluoroline illuminator, complete with 8 fluorescent Mazda lamps.
21. Balance—analytical.
22. Microscope lamp, adjustable.
23. 1 Sturdy leatherette case complete with 9 all-glass flasks and nozzles.
24. 1 Chevrolet carry-all purchased to transport the engineers and their equipment.
25. 1 International 15 KW gasoline generating unit.
26. 1 Army trailer.

The above army trailer was purchased to transport the gasoline generating unit. The gasoline generating unit was purchased for the purpose of obtaining power for current for the x-ray unit of our Industrial Hygiene bus to be used at industries that are unable to give us the adequate amount of current required in x-raying employees.

I. Field

- A. Plants visited 120
 1. For routine inspection 73
 2. For special Industrial Hygiene Surveys 55
 - a. Samples atmospheric contaminants collected 257
 - (1) Dust 184
 - (2) Other 73
 3. Number workers involved 13,584

II. Laboratory

- A. Analyses 254
 1. Dust 214

a. Particle count	.....	206
b. Particle size	.....	0
c. Petrographic	.....	3
2. Other contaminants	.....	37

III. Miscellaneous

A. Reports	.....	117
1. Routine inspection	.....	51
2. Special Industrial Hygiene Surveys	.....	55
3. Monthly	.....	10
4. Annual	.....	2
B. Conferences and Meetings	.....	12
C. Papers Presented	.....	0

BUREAU OF TUBERCULOSIS CONTROL

T. F. Vestal, M.D., Director

At the beginning of the period covered by this report, the Division had three mobile (70mm) photofluorographic x-ray units in operation in Halifax County. Another unit on loan from the U.S.P.H.S. was also in use. The Halifax survey began about December 1st, 1946 and was concluded about February 1st, 1947, at which time all personnel on loan, except one doctor, were recalled by the U.S.P.H.S.

During the Wake County survey which ran from February through April, a new mobile unit was put in operation, bringing the total to four. A second 15 KVA gasoline generator was purchased and installed on the renovated 1½ ton Ford tractor. Two complete film processing tanks and dryer were purchased and installed in the darkroom in the basement of the State Health Department building. The State Hospital in Raleigh was also surveyed with a 5% T.B. incidence recorded.

Edgecombe and Transylvania Counties were surveyed simultaneously during May, as was Concord, N. C.

June and July were spent surveying the Catawba-Lincoln-Alexander Health District. A very low percentage of tuberculosis was found, especially in Catawba and Lincoln Counties.

During the time the personnel was on annual vacation, the automotive

equipment was taken to Charlotte for repairs and inspection. The x-ray equipment was thoroughly gone over and necessary repairs made at the General Electric Office in the same city.

About September 1st the Asheville-Buncombe County survey got under way and was concluded about the end of October. This survey revealed the greatest number of T.B. cases up to that time.

The greater part of November was spent in a survey in High Point. During this time a photofluorographic unit was installed in the lobby of Duke Hospital as an experimental project to be operated by the Department of Radiology. The Technician for the Duke unit was trained on the High Point survey.

The month of December was spent in surveying Greensboro and Guilford County.

During the year, in addition to the field work, the Division was called upon to interpret numerous films sent in from a number of counties doing their own surveys. Work was started on remodeling another trailer and installing a fifth photofluorographic unit.

Summary

Ten County Surveys
Four City Surveys
One Mental Institution

Location	Total Examinations	Susp. T.B.	De-finite T.B.	Other
Counties				
Wake	51,383	369	7	246

Halifax:

Edgecombe	11,529	78	41	2
Cabarrus	6,724	30	5	3
Transylvania	5,082	56	11	8
Catawba-Lincoln-				

Alexander	40,593	232	12	109
Buncombe	22,006	223	14	59
Guilford	49,216	224	12	129
Hoke	3,258	61	12	75

City Surveys

Asheville	23,346	314	16	87
Greensboro ²				
High Point	23,477	168	9	66
Raleigh ³				

Institutions

State Hospital at Raleigh ⁴

TOTAL 236,614 1,755 139 784

¹ Survey for Halifax County was begun in 1946 and was completed in the first weeks of January, 1947. The figures for this complete survey were used in the 1946 report.

² Figures included in Guilford County Survey

³ Figures included in Wake County Survey

⁴ Figures included in Wake County Survey

BUREAU OF CANCER CONTROL

Ivan M. Procter, M.D., Director
Mildred W. S. Schram, Ph.D.,
Field Director
(March 1, 1948)

The North Carolina Cancer Control Program was formally initiated March 1, 1948 with Ivan Procter, M.D., as Director of the Bureau of Cancer Control in the State Board of Health.

A detailed plan of operation had previously been prepared by the Director, presented to and approved by the State Health Officer, the State Board of Health, the Cancer Committee of the State Medical Society and the Executive Committee of the North Carolina Division of the American Cancer Society. The plan was prepared after making a survey of North Carolina and a personal study of clinics and Cancer Control in the State of Georgia, Virginia, Pennsylvania and New York.

The objectives are:

1. To render the greatest amount of Cancer Control Service to the greatest number of citizens of the State in the shortest time practical;

2. To find the Cancers now present;

3. To accurately diagnose and recommend adequate treatment.

These objectives to be reached efficiently, economically, and speedily by:

1. Examining the groups of adults where cancer is most commonly found; namely: males and females, 40 years of age and above.

2. Examining those parts of the human body where cancer occurs most common, where it is detectable and most likely curable; namely: five points —skin, mouth, breast, genitalia (male and female); rectum (and prostate).

The screening process is to be conducted in Detection Clinics, operated by two or more qualified physicians with assistance. This limited examination is a new experiment (trial for a period of three years) differing from the Standard Detection Clinic but justifiable in order to screen a large number of people and to devote our time, talent, and money to Cancer Control rather than to general health maintenance. It will reduce the per capita cost of examinees to one-third. This is necessary when we consider that there are 750,000 North Carolinians over forty years of age that should be examined.

When Cancer or probable cancer is detected in the screening clinic the patient is referred to the Cancer Diagnostic-Management Clinic for complete diagnosis and recommendation as to management. The staff of this clinic consists of a Pathologist, radiologist, internist, surgeon, gynecologist, and dermatologist with other specialists as consultants.

Any citizen of the State without regard to race, creed, color or economic circumstance is admitted to any clinic without charge.

All patients are returned to their physician for treatment.

Physicians are to receive a small compensation for their services.

Each county unit is semi-autonomous in that they elect and control their own staff members. The local Director must be approved by the Cancer Control Division and comply with the policies of the State Board of Health.

How Are The Clinics Established?
The Director of the Division of Cancer Control presents the program in detail to the Officers, Cabinet, and Cancer Committee of a selected County Medical Society. If they disapprove the plan all action in that county stops at once.

If the plan is approved it is then presented to the entire County Medical Society for their consideration and approval. When adopted, Detection Clinic Examiners and Cancer Clinic Staff members are elected by the entire membership of the County Medical Society.

During the month of March, the plan was presented to:

1. Wake County Medical Society Officers;
2. New Hanover Medical Society Officers;
3. New Hanover Medical Society Membership;
4. Buncombe County Medical Society Officers and Cancer Committee;
5. Mecklenburg County Medical Society Cabinet;
6. Buncombe Medical Society Committee;
7. Buncombe County Medical Society Membership.

New Hanover County Medical Society adopted the program by a vote of twenty-nine to one. Buncombe County Medical Society approved without a dissenting vote, after the Committee had thoroughly cross-examined the Director. Forsyth, Guilford, and Durham-Orange are on schedule.

When clinics have been established in the seven counties with the greatest population, where the services of a pathologist and other specialists are available to form an approved Cancer Clinic, the first phase of our program will be complete.

After a sufficient number of selected County Medical Societies have adopted the Program and their dual clinics are in satisfactory operation the second phase will be initiated. This will consist of the establishment of Detection Clinics in strategic counties through the State.

PUBLIC HEALTH PUBLICITY
Mr. William H. Richardson, Publicity Specialist

The work of the Senior Publicity Specialists has proceeded in conformity with the policy in vogue since the

establishment of this position.

During the year, there were fifty-two regularly scheduled broadcasts made over Radio Station WPTF, these having been given each week, on Saturdays from 9:15 to 9:30 A.M. The subjects were varied, dealing with the different phases of Public Health Work. There were several series of broadcasts which seemed to elicit special interest on the part of the listening public, especially that series based on the Public Health Publication known as "Your Child From One to Six." Several hundred letters requesting copies of the publication were received and the book supplied.

Broadcasts on heart diseases and diabetes met with a hearty response on the part of the public, several hundred letters having been received requesting

copies of the scripts on these subjects.

Major emphasis has been placed on broadcasts and on the news associations during recent months, because of the shortage of mimeograph paper with which to send out the hundreds of press articles necessary to cover all the papers, and because the Associated Press and the United Press are able to supply all the dailies by wire. Radio news editors are also furnished numerous items as occasion arise, and these have been especially cooperative.

The Senior Publicity Specialist, following custom, handled the publicity for the Medical Society of the State of North Carolina in 1947; also, cooperation was given such movements as the Foundation for Infantile Paralysis, the American Red Cross, etc.

HEART DISEASE STILL LEADING CAUSE OF DEATH AMONG DOCTORS

Journal Obituaries Show Fewer Physicians Died In 1947 Than In 1946, However; Average Age 66.7

FEWER physicians died in 1947 than in 1946, on the basis of the obituaries published in **The Journal of the American Medical Association** during the year. According to the January 24 issue of **The Journal**, physician deaths numbered 3,040 in 1947 as compared to 3,358 in 1946 and 2,962 in 1945. During 1947, however, the American Medical Directory Report Service received reports of deaths of 3,568 physicians in the United States and possessions, or 528 more than those published in **The Journal**.

The average age of the 3,040 whose obituaries were published was 66.7 years as compared to 66.1 in 1946 and 65.3 in 1945. As in previous years, the age group between 70 and 74 showed the highest number of deaths: 548. Two physicians lived to be more than 100 years old. The number by age groups compares favorably with 1946 except

in the 30 to 34 age group, where 43 deaths were recorded during 1946 as compared to 65 during 1947.

Diseases of the heart continued as the leading cause of death among physicians, with a total of 1,406 recorded. Coronary embolism, thrombosis and occlusion led the heart group with 677 as compared to 738 for 1946. Deaths from angina pectoris and other coronary diseases in 1947 showed an increase of 106 to 125; deaths from diseases of the myocardium and pericardium increased from 123 to 152, and deaths from other diseases of the heart increased from 375 to 432. There was a notable decrease in chronic valvular disease and rheumatic heart disease from 28 in 1946 to 10 in 1947.

Cerebral hemorrhage, thrombosis and embolism took the lives of 384 physicians. Arteriosclerosis caused 252 deaths, an increase of 67 over 1946. Hypertension, hypertensive cardiovascular disease and cardiorenal disease contributed to 162 deaths, an increase of 71 over 1946.

Diseases of the respiratory system caused 168 deaths, and 319 others were attributed to cancer and tumors. There were 49 deaths from diseases of the nervous system, 132 from diseases of the digestive system. Chronic nephritis or uremia was the commonest cause of death among diseases of the genitourinary system, with 109 recorded.

The suicide rate decreased: 40 were recorded, as compared to 55 during 1946. Seventeen suicides were attributed to bullet wounds, seven to poisoning, four to cut arteries, three to drugs, two each to hanging and gas and one each to anesthesia, jumping and burn-

ing to death; in two the method was unspecified.

There were five homicides, all due to shooting. Two physicians were killed by unknown assailants, one in a hold-up, one by cattle thieves and one by his patient.

Of the 159 accidental deaths, 68 involved automobiles. Five were collisions with trains, one a collision with a streetcar. Thirteen died in airplane crashes; nine were drowned, one when his fishing boat went over a dam. Six died of burns. One physician was killed when his tractor toppled down an embankment, and two died in the Wyne-coff Hotel fire in Atlanta, Ga.

REPORT HUMAN MILK STILL BEST MILK FOR AVERAGE YOUNG BABY

National Research Council Survey Shows Breast Milk Particularly Important In Preventing Disease Among Poor

As a food, human milk still remains the best type of milk for young infants, according to a survey by a subcommittee of the Committee on Maternal and Child Feeding of the National Research Council published in The Journal of the American Medical Association. C. Anderson Aldrich, M.D., Rochester, Minn., is author of the published report.

"Breast milk is to an appreciable extent a prophylactic food; it prevents or decreases the severity of many gastrointestinal disturbances," Dr. Aldrich writes, adding that it is an absolute preventive against constipation because it cannot solidify in the intestinal tract. "This preventive role of breast milk is much more noticeable when it operates among children in the less favored economic classes, among whom adequate health measures are not always available," he continues. In many of these gastrointestinal disturbances no other food seems adequate or assimilable. For this reason he suggests that breast-milk

stations be made available in large city areas.

One of the chief objections to breast-feeding, Dr. Aldrich observes, is that it sometimes causes infections of the breast. With the advent of chemotherapeutic agents such as sulfa and penicillin, this danger has somewhat lessened. Another objection is that breast milk may be too small in quantity to nourish the baby adequately. "When this is true, even after a conscientious attempt has been made, complementary feedings should be given after the breast feeding," the writer states. "However, it is believed that the diagnosis of insufficient breast milk is made too often on scanty evidence. . . .

"It has been stated that in this enlightened age breast feeding is unnecessary and a burden which the mother need not be expected to assume. This may be true in the case of babies whose care is under the direction of skilled physicians, but it probably is not true for the great number of babies reared under conditions in which competent medical advice is inadequate or unavailable.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912
Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 63

JULY, 1948

No. 7



John William Roy Norton, M.D., M.P.H., State Health Officer

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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JOHN H. HAMILTON, M.D., Acting Editor

TRENDS IN PUBLIC HEALTH

By

J. W. R. NORTON, M.D., M.P.H.
State Health Officer

THE administration of Public Health is a public trust, involving responsibilities to every individual, regardless of his or her station in life. Disease shows no favoritism; it asks no quarter in its destructive work. Neither should we who are charged with the eradication and control of those human ailments. We must fight each of these enemies of life and happiness with all the means at our command. We must attack them as a group as well as individually, throwing our main strength where resistance is most stubborn. By so doing with all the means at our command we will meet the responsibilities devolving upon us as Public Health Workers.

We should strive toward a balanced program that will give all the people protection against all controllable and preventable diseases. We have won great victories in the past. Having set our hands to the plow, we cannot, we must not, we will not turn back.

The story of organized Public Health in North Carolina, dating back to the vision of Dr. Thomas Fanning Wood, of Wilmington, in the seventies, has been one of continued, if sometimes difficult, progress. His efforts, directed through the State Medical Society, bore definite fruit when, in 1877, the North Carolina State Board of Health was created, by an act of the General Assembly.

We must not forget the efforts of such pioneers as Dr. S. S. Satchwell, the first President of the State Board of Health. Nor can we overlook the unselfish work of Dr. Richard H. Lewis, who helped to lay the solid foundations upon which our Public Health structure rests. His services will forever remain engraved on the pages of Public Health history in this State. Then, there were such worthy successors to the pioneers, and to Dr. Lewis, as Dr. Watson S. Rankin, Dr. Charles O'H. Laughinghouse, Dr. James M. Parrott and the recently-retired Secretary and State Health Officer, Dr. Carl V. Reynolds. And, of course, none of us is unmindful of the major role played by Dr. George M. Cooper, who has occupied practically every important post in Public Health work for the past third of a century, from Acting State Health Officer to Director of the Board's vital activities. Each, with the material in hand, added to the great structure dedicated to human betterment. Each played an important part in forming the pattern we are now privileged to follow.

As time moves on; as conditions change, and as new problems and new opportunities for their solution present themselves, we must, with gratitude to our predecessors and with a sense of responsibility to those we are called upon to serve, in the great war on disease and death, continue to build for

the future. With the help of Divine Providence, always the dependable ally of those dedicated to a noble cause, we must ever bear in mind that we are our brother's keeper. Above all, Public Health must develop and maintain a spirit of sympathy, without which no individual or group can hope to succeed in any worthy undertaking.

Public Health, to be successfully administered, must be all-inclusive in its scope and in its primary objectives. While its duties and its responsibilities are manifold, they must be integrated and made interdependent. Much already has been accomplished, in bringing under control many of those communicable and infectious diseases which formerly took a heavy toll of life with each passing year; maternal and infant death rates have been decreased; the training of personnel with which to carry on Public Health activities effectively and intelligently has progressed to the point where the Public Health worker may regard himself or herself, with justifiable pride, as a specialist. Yet, the victories won have been achieved only through the co-operation of three groups; namely, those comprising the medical profession, those who have chosen to work in the Public Health program, and last, but by no means least, a cooperative, enlightened public. Neither of the groups could have won these victories on a non-cooperative basis.

Much has been accomplished, through preventive medicine, to which Public Health is dedicated, in the prevention and control of many diseases, including those associated with, and formerly very fatal to, childhood; the control of venereal diseases, the almost complete eradication of smallpox and typhoid fever. But humanity still is confronted with a major health problem, which manifests itself in the increasing number of deaths caused by what we term the degenerative diseases, which attack and kill mostly those in middle and late life. A survey of vital statistics in North Carolina for the first quarter of the present year, for example, showed

that more than half the deaths which occurred during that period were attributable to just four causes, diseases of the heart, intracranial vascular lesions, cancer and nephritis. And so, there is a great field lying ahead for medicine, both curative and preventive, in which we must do battle with these and other baffling ailments, with a view to finally bringing them under control. We face here a challenge that must be met in a cooperative spirit, and a problem in the solution of which we must bring into play the processes of education, as well as scientific skill.

The victories of the past quarter of a century have been great, and we owe to those who have helped to win them a debt of everlasting gratitude. But the victories of the past constitute a challenge to the future. Fields once brought under the light of Public Health progress must not be allowed to suffer a dim-out, through either indifference or neglect, or both. Environmental sanitation, for example, is one of the oldest branches of Public Health work. It is basic and must be enlarged from the individual and the home, so as to include whole towns, cities, and all the streams from which infection might come to the group or the individual. New immunizations give us better control over old scourges, but they do not relieve us of existing or future responsibilities. Not only in spite of, but because of the progress we have made in bringing them under control, we must continue our vigilance against such controllable diseases as smallpox, typhoid and diphtheria, which conceivably might stage a come-back, once we withdraw our armies of occupation.

Earlier diagnostic tests, new chemicals, drugs and biologics are welcome tools to be used against serious diseases. These tools make the work of doctors and nurses more effective and more interesting, but none the less necessary. Good hospitals—and better hospitals—will always be a necessity.

Changes in our economy, population shifts, and an increased realization, on the part of the people, of their physical

needs, if they are to keep pace in this modern age, have combined to create a need for more doctors, more equitably distributed, to serve both our urban and rural populations. It is not likely that there will be any sudden decentralization of our urban population. Hence, the necessity for more doctors in our rural districts. This need can be met only by training more doctors. If those who go to work in small towns and rural communities are to serve best, they must have access to hospitals, and to clinical and diagnostic facilities. The conditions referred to also create the need for more Public Health workers, trained as specialists in their field. The facilities already are being provided to carry us a long way toward meeting existing deficiencies. The establishment of a State supported four-year medical school was a tremendous forward step. Means for the construction, throughout North Carolina, of more and better equipped hospitals, accessible to more people, have given us grounds for encouragement, as to meeting the future health needs of our people, both in the field of curative and preventive medicine, between which there always must be maintained a spirit of cooperation.

The general health of our people will rise or fall with the standards of living we maintain—in agriculture, industry, roads, education, churches, and the conservation of our material and human resources. Nor must we lose sight of the importance of recreation, community morale and the relationships we maintain one toward another, individually and collectively.

This makes it necessary that we all work together, irrespective of the particular field which the individual may occupy, or the race or the group to which he may belong. There must also be collective understanding, based on mutual trust and respect. We must all work together in order to bring about and maintain steady and continued human progress. Only in this way can we improve health.

In the matter of mass protection, including the safeguarding of water and

milk supplies, the sanitary disposal of waste matter, inspection of public eating places, etc., the individual is the recipient of benefits which have become a part of the State's routine services to its people. However, it is important that the people be kept informed as to progress in these matters, and that the individual should be instructed in matters in which his personal cooperation is needed—in maternal and child hygiene, the importance of immunization against preventable diseases, and other matters which cannot be administered without such co-operation.

We must also endeavor to cut down the lag between the acquisition of Public Health wisdom and its more general application. New knowledge concerning the importance of good nutrition and the importance of protection against the degenerative disease, through frequent and thorough physical examinations, for the detection of danger signals in middle and late life. All these vitally affect each individual and the general population, and call for the use of educational techniques. Our efforts to bring cancer, heart disease, diabetes, alcoholism, and nephritis under control cannot be accomplished as simple as we administer immunizing agents, or as we provide chlorinated water at the source of supply, or pasteurize the community's milk supply at the dairy where the milk is prepared for distribution.

To make progress comparable to that already made may be slower and even more costly, in a world of growing complexities.

In all these matters involving Public Health, we must not lose sight of the fact, but, rather, emphasize it, that Public Health administration, from the head of the Department to each and every worker on the pay roll, is becoming professionalized. This means that better training of all workers will be required as time goes on, in order to cope with increasingly complex duties and the expanding measure of service.

Both the citizenry and the Public Health worker must understand and collaborate with each other, in order to bring the causes of sickness and death under more complete control, wherever this is possible. Only through understanding and cooperation could smallpox and typhoid have been brought to their present minimum. But there are other vistas, the possibilities of which we must explore, as our knowledge increases and we widen the scope of our service to humanity. Not the least among these, by any means, is the field of mental hygiene. We know that we cannot empty our mental institutions from the top. This challenges us to explore the further possibilities open to us through the means of preventive medicine. In the care of our mentally sick, we have progressed comparatively little. We still depend largely upon custodial care, rather than prevention and cure. Herein lies a challenge which must be met, somewhere along the way. There still remain possibilities in many of the other major Public Health problems which confront us, and in the solution of which we must exercise teamwork and practice a sympathetic understanding.

As to the corps of Public Health workers, whether in Raleigh or in the outlying counties and cities of the State, it is well to remember that each,

in his or her own field, helps to constitute a life-saving crew—each co-operating with the other toward the achievement of the objectives to which they have dedicated themselves, individually and collectively.

Preventive medicine, in which Public Health is chiefly concerned, is just now getting fully under way. While a few scourge areas have been brought under the subjection of the will of medical science, spearheads have projected into rougher and more resistant fields. We must hold the offensive and launch new objectives. In no case, must we fall back or give ground to the enemy. The length and difficulty of the struggle thus far engaged in must serve to stimulate us to more concerted and more determined effort, in our fight to make this a happier and a more healthful world in which we may enjoy those inalienable rights with which we have been endowed by a benevolent creator.

In the continuance of its fight against disease and death—and in raising health standards among all the people—the State Board of Health, mindful of the responsibility which rests upon it, seek the prayerful cooperation of every citizen of North Carolina. We shall carry on, ever mindful of the dignity of the individual, and of his right to health as a God-given heritage.

AGING IS A NORMAL PROCESS YOU ARE GROWING OLDER CONGRATULATIONS!

By
VERNE S. CAVINESS, A.B. M.D.

WE all wish to continue to live, and live as well and as long as possible. Yet, after passing the teen age, no one wishes to grow **older**; growing **old** is especially resented. Obviously this produces a paradox for which the remedy can not be complete relief. Growing older day by day is a gradual

and progressive process—much more rapid for some individuals than for others—and as inevitable for all of us as ultimate death, setting of the sun, ebb and flow of tides and, notwithstanding common parlance to the contrary, more inevitable than taxes. It is true that we all shall die; but first, we

shall surely grow older.

Among lower animal species aging is in all respects a gradual deterioration. Shortly after reaching maturity degenerative changes begin. The rate of change depends on the species. The rate can be predicted much more accurately than in human beings. Each year an animal is expected to grow less valuable because of physical deterioration for which the compensatory enhancement seen in humans does not occur.

The aging human experience the same deterioration as lower animals—though at a less predictable rate. But *Homo sapiens*—the human—has the opportunity possessed by no other animal of attaining a compensatory mental development which permits his vital balance sheet to show a net gain in value and an increasingly favorable development until the stage of senility is reached. Being human and master of his own destiny, it is his personal responsibility to maintain the most favorable vital balance sheet possible. There are many ways by which this effort may be aided.

Man has no more opportunity than animals of escaping physical deterioration with advancing years. But man can learn to retard his aging process by learning to live with himself as he is; not as he was, nor as he may wish to be physically; but as he is.

The process of growing older physically begins in early adult life, soon after one "is grown"—about age 21 to 25—and continues steadily. We are accustomed to accepting many manifestations of aging as natural phenomena. Except from the standpoint of vanity, little attention is paid to gray hair and very often, especially in premature graying, it is scarcely associated with growing old. The individual who needs spectacles at about age 40 is showing in his eyes the effects of growing older. As the lens becomes too hard to accommodate for close up visualization, new lenses (spectacles) are needed to aid the old hardened lenses in the eyes. Bones gradually become more

brittle and are more easily broken as they become harder. The skin becomes harder, less soft and pliable. When pinched it does not regain its usual state so quickly. The brain does not escape, either. Memory is not so good; it is easier to forget names and later, faces; it is more difficult to memorize than when younger. Personality changes may occur later from the same cause. Blood pressure tends to rise, arteries become harder and one becomes more susceptible to various vascular disorders, many of which are indirect results of aging, but the process is the same.

One result of vascular changes is seen in fatigue which appears on less exertion than formerly. Many sports are suited only for the young. Tennis is a game to be played before the age of thirty. An outstanding baseball player is almost always in his twenties or thirties. Successful prizefighters are usually somewhat younger. Such strenuous physical exertion is not compatible with changes in the blood vessels of muscles and heart. As blood vessels become older and harder the walls thicken within the inner layers. The vessels do not become larger so the canals through the vessels must become smaller—this diminishes the volume blood flow and inadequate volumes of blood are delivered to vital tissues and organs of the body.

You have heard that a person is as old as his arteries. There is much truth in this old adage, yet we tend to neglect our arteries. If the vessels that supply blood to bone marrow fail in their function, anemia results. Failure of the circulation to the liver is associated with cirrhosis, some forms of dropsy and other conditions. Serious nephritis results from disorders of blood vessels in the kidneys. Circulatory changes in the brain cause apoplexy, loss of memory, etc. Hardening of arteries produces a gradual loss of strength and endurance in muscles. Disorders of veins may result in clotting of blood within the veins with thrombosis, at times known as milk

leg, and later by embolism if the blood clots become loosened and lodge elsewhere. Most heart attacks are due to degenerative changes in the blood vessels of the heart. Many of these disturbances are associated with high blood pressure.

What can be done about blood vessels? They are an integral part of your body and respond well to general medical care. The blood pressure has a strong influence on the quality of blood vessels and needs to be watched with especial caution and given competent treatment should it show signs of beginning to rise. Do not wait until it becomes high. When the blood pressure first begins to rise, it is usually easily controlled. But if one delays until the pressure becomes very high control becomes more difficult. If the delay is greater and vessels are allowed to become hard and sclerotic with permanent changes, much less can be done about it. Eventually the process will reach an irreversible stage and no improvement is to be expected.

So called change of life is another result of aging. It is beautifully protective. It takes much stress and strain off an aging body and helps it improve in other ways as it grows older. Mental aging allows one to become quite serene, composed, "secure" at a time when such changes can be of benefit to the individual and often the apparent need for a magnificently developed physique has proved to be a will o' the wisp. Nature does not appear to be so generous in this method of protection for animals other than the human.

As one grows older chronologically and physically, mental processes improve; judgment becomes more mature and dependable. The person has learned many things by experience and perhaps by study and it is on these factors that sound judgment is developed. Even animals seem to learn to live more by their wits as they grow older and more feeble.

Due to improved judgment as well as to more easily induced fatigue, older persons are likely to hurry less and

make fewer mistakes. This is because they can work under less stress and strain. They then can concentrate on accuracy. Better or more skilled work rather than high volume is the result. As people grow older they tend to pay more attention to business and other serious matters; there is concentration on more important aspects of life; less time is spent looking for trouble. All in all, there is a strong tendency among intellectually minded persons to become more intellectual; workers generally tend to do better work; more accurate and of higher quality. As one grows older it is realized that no one person can do everything so there is a tendency to concentrate on the matter at hand and do a better job. Positions of trust and responsibility are usually filled by older men. Young men run the errands.

Nature is very generous in her dealings with humans and helps us in many ways to adjust ourselves to a new and in many respects a better way of living. However, in general, nature only helps us to help ourselves.

It remains for us to cooperate by avoiding undue stress and strain and unreasonable exertion during advancing years. Tell others what you wish about your age but never **forget** your own true age and always **act** your age. You cannot kid yourself—you usually do not kid others as much as you think you do—so do not attempt it. Accept things as they are. Everyone else knows you are growing older and that you cannot see very well after age 40 without spectacles. You know it too, so why not wear them? Vanity? Many people look better wearing spectacles than without them. If you do not wear them, you will see much less and will be under a lot of stress and strain because of defective vision; you not only miss a lot of things you need to see and would like to see, but you aid the more rapid development of aging processes.

A marked similarity exists between infancy and senility, the two extremes of life. Both require careful handling by gentle means and avoidance of dras-

tic measures. This is seen in the need for proper diet as well as for careful management. This is equally disliked by both groups. Temperance and moderation in everything is not to be applied only to alcoholic beverages. It is equally as important that it be applied to eating, smoking, physical activities of all descriptions—in fact, to everything we do. As we grow older, this becomes increasingly important.

What is the most difficult period of life? Most people always think they are living in the most difficult period of their lives, and think it throughout the entire life. For many, tomorrow is always the most difficult and yesterday was the worst. Why worry about difficult periods? Today is the most important period of life, so why should it be shunned? Live **today** knowing it is the most important day. But, how? Relax! That will help you do better work, more of it, and enjoy it.

How is your health today? Not yesterday, nor tomorrow, but today. Of course, you do not procrastinate seeking needed medical care if it is needed. Almost all serious ailments were formerly much less serious and **could have been** corrected easily. Seek competent medical advice whenever needed and follow it. If you take good care of yourself until you are 65 years of age, the next 18 or 20 years will be surprisingly easy. Practically as well as statistically you can establish your claim to this much good, active, satisfactory life and probably to several additional years.

Aging is actual, active and permanent. Yet it is in aging that we see

demonstrations of the finer points of differentiation between man and the lower animals as well as between various classes of humans. The person who ages gracefully and correctly is definitely due congratulations for having achieved the ultimate goal of his life as a member of the group *Homo sapiens*. Graceful and correct living and aging embodies not only ones opportunities and duties to himself but to his friends and neighbors as well. The individual who lives only for himself cannot live nor age correctly nor gracefully. Such qualities are not noticeable in a purely introspective existence.

By all means live, but live so that you can grow old, as old as you wish. Do this by living gracefully and slowly. You will be surprised by how much better and more enjoyable it will be. **Grow older**, yes by all means grow and grow as much older as you can, but do not grow **old** until you have to.

Youth is very fine in its place and everyone has a right to full enjoyment of youth. But after youth is gone greater possibilities of life unfold for every one who is interested and who can develop the proper philosophy of life. Childhood and youth are excellent training grounds for a really successful life,—and that is an essential goal in the life of every human being; else, why be a human?

Omar Khayyam had a very clear conception of the proper philosophy of life with respect to aging when he wrote "Grow old [older] along with me, the best is yet to be."

TYPHOID DOWN BUT NOT OUT

*By ALFRED MORDECAI, M.D.
City-County Health Dept.
Winston-Salem, N. C.*

IT is not uncommon these days to hear the remark, that "typhoid fever has been wiped out."

While this disease has been enor-

mously reduced, it would be a grave mistake to assume that it has been eradicated, or even reduced beyond threat of danger. Nature still maintains

a hidden reservoir in our midst and any catastrophe of sufficient import to cause a serious disruption of our general sanitation, or typhoid control measures, would without doubt lead to widespread seasonal epidemics, as in the days of old.

The "hidden reservoir" consists of those human incubators who have escaped detection, whom we call "Chronic Typhoid Carriers." How many there are we can only guess at, but we do know that typhoid fever does go on. That some cases are being overlooked is almost certain. Due either to attenuated strains of typhoid organisms, or increased resistance of the victims as a result of mass immunization, the cases that are encountered these days are comparatively mild, and atypical. Unless the general practitioner is alert; unless he resorts to timely blood cultures, repeated agglutination tests and other laboratory investigations, he will miss some cases. Facilities for proper investigation are not always readily available in general practice, particularly in rural areas where the disease is most likely to be encountered.

By typhoid control measures we mean, of course:

1. Mass immunization with typhoid vaccine
2. Water purification
3. Proper sewage disposal
4. Milk and food sanitation
5. Control of the common house fly
6. Control of acute and chronic carriers.

The importance of the latter must be appreciated and the Medical profession must not fail to consider the possibility of typhoid, regardless of season, whenever encountering any obscure, protracted type of fever.

The pupils in our public schools read of "Typhoid Mary," but teacher and pupil alike are inclined to regard this story as ancient history, or just an interesting myth.

Perhaps the following report will help convince them to the contrary, and at the same time justify the statement above made, to the effect that

if not on our guard, typhoid fever may reappear in epidemic proportions.

On January 12, 1947, a three year old white child (L.W.), from a neighboring county, was admitted to the City Memorial Hospital in Winston-Salem. This child had been ill for approximately one week with general malaise and an unexplained fever. Typhoid was not suspected because of the season, its rarity, and the apparent absence of exposure. Yet the presence of this infection turned up promptly in the diagnostic net of routine hospital investigation. The diagnosis was not only made, but confirmed by repeated cultures and other diagnostic procedures. The blood, the urine and the fecal discharges were repeatedly positive for living typhoid bacilli. The course of the fever was suggestive though moderate, and during the stage of recovery the agglutination tests were strongly positive for typhoid.

This child had not been vaccinated against typhoid fever because of his tender age and the absence of any typhoid in the community over a long period. The sanitation in the home was reasonably good. The mother had always given the child her personal attention, until a very short time prior to the onset of this illness. She had exercised due care and technique in the selection and preparation of all foods and drink.

During the Christmas season immediately preceding the child's illness the home had welcomed and entertained relatives from neighboring communities. Notable among these were the paternal grandmother, aged 47, from a rural section of Forsyth County, and the maternal great-grandmother, who resided on a farm in Stokes County. The former individual left for home after a visit of two or three days. The great-grandmother, however, prolonged her visit, because the child's mother became slightly indisposed and had to remain in bed for a few days.

Great-grandma had always enjoyed the reputation of being an excellent cook as well as a first-class hand at

caring for children. Despite the age of 86, this venerable lady took charge of the child and the household cookery. For a week following Christmas she prepared the meals and fed the child. The latter fell sick approximately two weeks from the time that she assumed this kindly responsibility.

Investigation revealed that the paternal grandmother, who resides in Forsyth County, had typhoid fever when she was about 30 years old. She gave a long history of "dyspepsia" and "gall bladder trouble" on and off since she had had the "fever," but contrary to expectation she was repeatedly negative for typhoid bacilli and though still under suspicion she has never been proved to be a typhoid carrier.

Such was not the case of the maternal great-grandmother who came from the farm back in Stokes County. This lady's husband died of typhoid fever, at which time she was 35 years old. She contracted the disease at that time and "almost died," but eventually made a good recovery and has enjoyed good health ever since. Since that time however, there has been a succession of typhoid cases among her children and grandchildren, down to the great grandchild mentioned above. These cases have popped up mysteriously from time to time after long intervals, but in all there is the story of contact. Altogether there have been eleven cases known definitely to have been typhoid fever. There have been several other cases of protracted fever among near relatives that were not definitely diagnosed or that were otherwise labelled.

For instance there was a 15 year old grandson (of Stokes County), who fell sick of fever soon after Christmas in 1946. For about three weeks he had malaise and a continuous fever. Gradually the fever subsided. He was up for a week when the fever returned. There were some dark colored stools, marked anemia, and one ankle became slightly swollen and painful. He was finally given a diagnosis of "rheumatic fever" but an examination of the record is far from convincing. Recovery was

complete and the case smacks strongly of typhoid fever with a relapse complicated with arthritis.

The first specimen of feces obtained from great-grandma was reported positive for typhoid bacilli, which was no surprise. Subsequent specimens were also positive, at least one of which was "super charged." This was also no surprise. Explaining the facts, and convincing this lady of the dangers however, was another matter. She had been active in household and kitchen work for many years. For the past few years her activities had been confined to her own home, except on special occasions, but formerly she had been extremely active in her community. She was a famous cook and took a leading role in all church suppers and community picnics. At that time typhoid fever was very common every summer throughout the county.

It was an interesting fact that the dwelling where this great-grandmother lived (a time honored farm house), had no toilet or privy, whatsoever, and had never had one. The old open well however, had been converted into a closed pump and was in satisfactory condition.

For fifty years we have been tackling the problem of open wells, springs, fly-breeding and unsanitary privies. Yet a survey in almost any large rural area in this state will show surprising backwardness. Twenty-two hundred farms in one county without any sort of privy. Fifteen hundred in another. twelve hundred in another. Some of these selling milk. Some selling fruits and vegetables. All using cow stalls, open wells, and springs. Fortunately the milk is pasteurized, most consumers wash fruits, cook their vegetables and seek vaccination against typhoid. It is remarkable that we do not have more typhoid fever and dysentery. Grow too careless and we will.

SUMMARY: A case of typhoid fever in an unvaccinated three year old child during a winter month is herein reported. The infection was undoubtedly acquired from an 86 year old great-

grandmother, who was proved to be a "chronic typhoid carrier."

CONCLUSION: Had this child not been admitted to a well equipped hospital and subjected to an intelligent work-up it is quite probable that the diagnosis of typhoid fever would never have been established. Typhoid fever as a disease entity has not been "wiped out." There must be no let-down of sanitary precautions. Mass vaccination against this disease must continue. The education of the public must proceed. There is still a crying need for improved sanitation on the farms. We are still backward.

As a matter of fact, many of our cities obtain their drinking water from highly polluted streams. If anything should go wrong with the treatment processes for even a few hours, our water supply would be highly dangerous. One typhoid carrier could create

an epidemic. In these days of floods, cyclones and atomic bombs, major catastrophes are not beyond the possibilities of reality. We should keep on guard.

Vaccination against typhoid must continue. We should guard against any large per cent of the civilian population growing up unprotected. The susceptible group must be kept as small as possible. City dwellers as well as those who live on the farm, or in rural communities should be vaccinated. The winter and early spring months should be the most opportune time for this. Particularly is this true for farm dwellers who should have a well established immunity before the onset of warm weather, which not only coincides with the fly and typhoid fever season, but likewise corresponds to the busiest work period of the year, when many cannot, or will not, take time out for vaccination procedures.

NOTES AND COMMENT

By

ACTING EDITOR

OUR FRONT COVER introduces Dr. John William Roy Norton, elected North Carolina State Health Officer by the State Board of Health, who took the Oath of Office July 1, 1948 as successor to Dr. Carl V. Reynolds, whose resignation took effect June 30th.

Dr. Norton was born and reared in a rural section of Scotland County. He was born July 11, 1898. He attended the public schools of his county and matriculated at Trinity College, now Duke. He received an A.B. degree there in June, 1920. For the two scholastic years September, 1920 to June, 1922, he was principal and athletic coach in a high school in Lumberton. From September, 1922 to June, 1923, he took a year's work in law, receiving a degree in June, 1923, from the Law School at Trinity College headed by Professor Mordecai. From September, 1923, to June, 1924,

he was principal and athletic coach of Sneads Grove School, in Laurinburg, North Carolina.

In September, 1924, Dr. Norton entered the University of North Carolina Medical School at Chapel Hill, completing his first two years in medicine there and receiving a certificate in June, 1926. In September of the same year he entered Vanderbilt University Medical School in Nashville, Tennessee, receiving his degree of M.D. from that institution in 1928. From July, 1928, to June, 1929, he was intern in the Henry Ford Hospital in Detroit, Michigan. From July, 1929, to June 30, 1930, he was a member of the medical staff of the Henry Ford Hospital in Detroit, Michigan. From July 1, 1930, to June 30, 1931, he was chief of the medical department of the Holt-Crock Clinic at Fort Smith, Arkansas. From 1931 to

1935, a period of four years, he was Superintendent of Health of the City of Rocky Mount, North Carolina. From September, 1935, to June, 1936, embracing the scholastic year, he took a course in the Harvard School of Public Health, headed by Dr. Milton J. Rosenau, receiving the degree of Master of Public Health at the conclusion of that year's work.

In the summer of 1936, following his completion of the Harvard course, Dr. Norton joined the staff of the State Board of Health and was Assistant Director of County Health Work with headquarters in the Raleigh office of the Board. When Dr. T. C. Worth resigned as Assistant Director in the Division of Preventive Medicine and left the service in the late summer of 1937, Dr. Norton became Assistant Director of Preventive Medicine with the State Board of Health, where he served until September, 1938 when Dr. Rosenau induced him to become Professor of Public Health Administration in the University of North Carolina School of Public Health, which position he held until November, 1940. Then his Commission as a Reserve Officer in the United States Army was activated and he entered the service of his Country as Captain in the Medical Corps and was assigned to Fort Bragg. For several months he had charge of the entire camp sanitation facilities at Fort Bragg where he made a distin-

guished record particularly in the field of water supply and sanitation. He was then ordered overseas and was in charge of a medical layout for the First United States Army during the invasion of Africa. After serving months in Africa as a member of General Patton's Staff he was with our Army in Italy. Still later he was placed in charge of one of the most important camps in England, being stationed near London. He served there and in other areas of Europe and after about three years' foreign duty he was returned home as a Lieutenant-Colonel in the Medical Corps. He was then assigned to duty in Salt Lake City, Utah and placed in charge of the sanitation facilities in Army camps of seven northwestern states. He was then given permanent terminal leave in September, 1945.

Since that time he has been with the Tennessee Valley Authority as a Staff Officer with headquarters at Chattanooga, Tennessee.

While in military service he was General Patton's army medical inspector and won combat stars in Tunisia and Sicily; six army campaign ribbons, and an Army Commendation Ribbon.

Dr. Norton comes back to his native state and assumes his duties as North Carolina's State Health Officer with the best wishes for a successful administration by all true friends of Public Health.

MISS BROWN APPROACHES 29TH YEAR AS PUBLIC HEALTH NURSE

BY GERTRUDE RAMSEY

For many years, the sight of Miss Jane Brown in her blue public health nursing uniform coming in the door has been an immensely cheering sight to the sick persons to whom she ministers under the city health department rules and the provision of the Metropolitan Life Insurance Company.

Miss Brown, who received her nurs-

ing training at Watts hospital in Durham, joined the staff of the Associated Charities in 1912 as nurse. Her duties with this organized charitable service were to care for the indigent ill, under the direction of the Charities' doctor, and to assist in the three clinics of the charities.

Before this, she had been on the

nursing staff of Biltmore hospital for three years, and had done private duty nursing here and in other parts of the state.

Miss Brown joined the health department May 15, 1919, as one of three public health nurses in the newly-organized nursing department.

Since that time, in her own words, she has "been going right along with the job."

The phrase is a little too brief to cover the duties of a public health nurse. They assist in the clinics, which include well-baby conferences, maternity and infancy clinics, immunization clinics, and the venereal disease clinics. They, with the school physician, keep a watchful eye on the health of the thousands of school children in the city. Nursing care is provided through the Metropolitan Life Insurance Company's plan, to policy holders. They check to see that quarantines are kept.

Sometimes people wonder why a career in public health nursing is chosen. Miss Brown has an answer for them in her own deep satisfaction in her job. She recommends it as one of the most satisfying careers of all. When you consider Miss Brown's record, it is.

She has watched the growth of the city and as the city grew in population and area, the health records prove the quality—and quantity—of the work of the health department.

Thousands of school children for nearly thirty years have known Miss Brown as "the nurse"; many of the children in school now are the sons and daughters of boys and girls she knew in the first grade.

A member of the city health depart-



MISS JANE BROWN, who began her public health nursing work with the city health department on May 15, 1919, is pictured at her desk in the nurses' office of the department. Miss Brown received her training at Watts hospital in Durham, and joined the health department after several years of private duty nursing and hospital duty, and several years as the Associated Charities nurse here in Asheville.

ment once said that public health work is "like a call to preach." It is indeed a work in which one must believe deeply.

Miss Brown does believe in her work, and the affection with which she is regarded by everyone measures her success.

THE FOUR HORSEMEN OF 1948

BY WILLIAM H. RICHARDSON
North Carolina State Board of Health

Diseases associated with middle and late life were responsible for 4,695 of the 8,574 deaths which occurred in North Carolina during the first quarter

of 1948, according to figures compiled by the State Board of Health's Division of Vital Statistics.

Substantial increases over the cor-

responding period of 1947 were shown in deaths from diseases of the heart, **apoplexy**, **cancer**, and **nephritis**. The total of 4,695, above referred to, was 711 in excess of the 3,984 such deaths which occurred during the first three months of last year.

Deaths resulting from each of these diseases, through March, were far in excess of those reported during the first quarter of last year. For example, during January, February and March of this year, 2,279 people in North Carolina succumbed to heart disease, as compared with only 1,842 a year ago. Cancer deaths rose from 636 to 721, apoplexy deaths from 839 to 987, and deaths from nephritis, or Bright's disease, from 667 to 708.

Thus, we see that considerably more than half of all the deaths reported in this State for the first quarter of the present year were attributed to just four cases — all of these diseases of middle and late life. Add to the 4,695, the 585 who died as the result of accidents, and we have a total of 5,280 deaths out of a total of 8,574 during the initial quarter of 1948, compared with a total of only 4,575 for the corresponding period of 1947.

Although there has been too much laxness on the part of parents and guardians in the immunization of children against such preventable diseases as diphtheria, and while there are many who have not been immunized against typhoid fever, yet these diseases are subject to control, and the public, for the most part, has taken advantage of measures designed to prevent them.

But, when it comes to the four diseases—already enumerated—which are killing more than half as many people at the present time, in North Carolina, as all causes combined, we are confronted with a different, and an even more difficult, problem. As to the preventable and controllable diseases, we can always resort to immunizations—and sanitation—with the assurance that these will afford us almost complete protection, in most instances, at least.

Early Treatment Necessary

As to the diseases of middle life, no means of immunization against them have been discovered; and for their control, we are dependent upon diagnosis and early treatment, especially cancer. For present and future potential cancer sufferers, the outlook is much brighter than it was a few years ago. In the first place, people are becoming **more cancer-conscious**! This has been brought about through the processes of education with the assistance of the medical profession and certain organizations in which the doctors have **confidence** — as to their sincerity and singleness of purpose. There are so many organizations springing up over the country, raising funds for this and that, that the public has to be cautious — and well it might be. If we are going to spend money for what we conceive to be humanitarian purposes, then we ought, at least, to know what we are spending that money for.

The American Cancer Society is working with and has the confidence of those who hope to bring one of the greatest enemies that ever attacked humanity under control.

The North Carolina plan of attacking cancer, under the direction of Dr. Ivan M. Procter, is a subject about which the public will hear much, as time goes on. Already, clinics have been set up and lines have been drawn for a fight to the finish, commensurate with the accomplishments of medical science, and in anticipation of even more effective methods for combatting cancer, as time goes on. At present, **early detection** and the **treatment** of cancer in its early stages are claiming major emphasis.

After placing so much emphasis on the word "early," the demand for a definition is justified. Recognition is early, it is pointed out, when the cancer is discovered in a stage where it is **eradicable** — completely **eradicable**, to effect a cure, or partially, so that the patient's span of life may be lengthened materially.

There are, of course, some cancers

which do not produce a leading symptom until too late for any successful therapy. Others are so malignant that a diagnosis made soon after the appearance of the first symptoms—early—is still of no avail. Such exceptional cases would seem to make the definition untenable, but for practical purposes, and the usual run of cases, the definition is workable. Successful treatment remains the principal indicator of early recognition which need not be concerned with the histologic classification or grading of the tumor.

The above statement was prepared by a medical authority.

Hence, the extreme importance of early diagnosis by one competent to make such a diagnosis. Therefore, if you have the slightest fear, even, that you may have cancer in its incipiency, seek medical advice without the loss of one moment. Cancer is treacherous. It attacks without fear or favor. Its victims are among the high and the low, the rich and the poor, black and white, ignorant and learned. Every person over forty is one of its potential victims. Don't give it a chance to seize upon you. Consult your doctor, if you have the slightest suspicion of its approach. By so doing, you may save your life.

Don't Take Chances

As to the other so-called degenerative diseases of middle and late life, take no chances with them, either. While they are not preventable; yet, to place yourself in the hands of a **competent medical doctor**, for frequent and thorough **physical checkups**, may mean the difference between a long life and an early death. In giving you a complete physical examination, your doctor will check your heart, your kidneys, your blood pressure—in fact, he will endeavor to detect, and inform you of, any **danger signal** which you should heed. He may make suggestions that will change your way of life, but which,

when followed, will **prolong** your life.

Complete reports for the first three months of 1948 show that there were 28,212 babies born in North Carolina during January, February and March of this year, fewer than were born during the corresponding period of 1947, at the end of which an all-time record had been set. Infant and maternal deaths for the period were about the same as last year, despite the total rise of 859 in the number of deaths among all age groups for the quarter under consideration.

While there was a decrease in the number of deaths due to motor vehicle accidents, other preventable accidents were responsible for 405, as compared with 365 during the first quarter of last year. Many such accidents occurred in the **homes of our people**.

More Pneumonia Deaths

Despite improved methods of treatment, there were 787 deaths from influenza and the pneumonias during January, February and March, against 526 last year. We have passed the season of the year when colds are considered to be prevalent, but it might be well during the coming fall and winter months for no one to take a simple cold lightly. All colds lower resistance and make the patient more susceptible to pneumonia and other infections. There is no such thing as a **simple cold**.

From time to time, the public is given figures on vital statistics in North Carolina. The figures themselves mean nothing, unless they are analyzed—and unless some **lesson** is drawn from their presentation. But there are figures the very presentation of which tells a story—or, should we say—sounds a **warning**.

Certainly, when deaths from just four diseases number more than half the deaths from all causes, it is time to consider these death-dealing maladies, and to do something about them, if possible.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request

Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912
Published monthly at the office of the Secretary of the Board, Raleigh, N. C.

Vol. 63

AUGUST, 1948

No. 8



PULLEN PARK LAKE, RALEIGH

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Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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THE Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 63

AUGUST, 1948

No. 8

J. W. R. NORTON, M.D., M.P.H., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

BRIEF REVIEW OF PUBLIC HEALTH HISTORY IN NORTH CAROLINA

BY GEORGE M. COOPER, M.D., ASSISTANT STATE HEALTH OFFICER
State Board of Health, Raleigh, North Carolina

People who do not familiarize themselves with the facts of history generally pay for their neglect. It is therefore important for us at this time to take a look at the records.

The first two years of the Board work was under the cumbersome direction of the Medical Society of the State of North Carolina. That organization was largely responsible for the Board's creation. Also at that time, practicing physicians everywhere were crusaders for preventive medicine.

So, the Board as at present operated was set up in 1879, making it just 69 years old.

During the first 33 years it had just two State Health Officers, both serving as part time officials and practicing medicine for a living.

The first of these notable physicians was Doctor Thomas F. Wood of Wilmington, who served from May 21, 1879 until his death on August 22, 1892. The second was Doctor Richard H. Lewis of Raleigh who was elected September 7, 1892 and served until his voluntary retirement June 30, 1909.

Both these men, though practicing their profession for a living, established the work on a solid foundation.

Doctor Lewis was able through years of persistent efforts to get the Legislature of 1909 to make legal provisions for a full-time secretary and State Health Officer and to secure the big

sum of \$10,500 a year for the Board of Health to carry on the work.

I recall at the time lending a weak hand by working on our Legislative member from Sampson, where I was practicing medicine at the time and serving as part-time county physician. I recall distinctly that the chief argument Doctor Lewis used was that if the General Assembly would come across, he himself would resign and so would not be a beneficiary of this big appropriation of \$10,500 a year.

On July 1, 1909 Doctor W. S. Rankin took office as the first whole-time State Health Officer, but the third State Health Officer. Doctor Rankin served continuously until his resignation May 31, 1925. Doctor Rankin's term was thus 16 years lacking one month, but it included a year's leave granted him by the Board from September 1, 1923 to August 31, 1924. During that year I was sworn in as Acting State Health Officer, having been made Assistant State Health Officer March 1, 1923, right when and where my troubles began in earnest. On May 30, 1925 the State Board of Health unanimously elected me Acting State Health Officer to serve for an indefinite term. This period turned out to be 16 months. On October 1, 1926 Doctor C. O. H. Laughinghouse took office and held it until his death on August 26, 1930.

After the death of Laughinghouse

there followed a period of confusion during which the Legislature of 1931 abolished the State Board of Health, enacted new legislation and provided for a new Board with some important changes. This "new" Board met on May 28, 1931, organized and unanimously elected one of its members, Doctor James M. Parrott as State Health Officer. Doctor Parrott took office July 1, 1931 and served until his death November 7, 1934.

On November 10, 1934, three days after Parrott's death, the Board met and again selected one of its members, Doctor Carl V. Reynolds, to be State Health Officer. Doctor Reynolds' service takes us up to midnight last night; hence, my own activity today. Having qualified as Acting State Health Officer on three separate occasions, totalling thirty-seven months, and each time working under a ruling by the current Attorney General. I am therefore serving as Acting Chief from midnight last night until this hour—without the salary of course, as in the past.

It will be seen that of the six permanently elected officers, two were part-time officials, three died in office, three voluntarily resigned.

It should also be especially noted that in every instance in the long history of the Board, whenever a vacancy occurred, no one ever had a look in for the place except a member of the Board itself, I mean the Board and not any employee of the organization, until the election of Doctor Norton by the present Board. Doctor Rankin was not a member, but he was not elected in 1909 until the place was offered to Doctor J. Howell Way, a member, who spent a week in Raleigh trying to decide whether his place in the medical profession and his dignity would suffer if he became the first full-time State Health Officer. He decided that it would and turned the place down. No other member of the Board at that time cared for it.

Much has been said recently about the prosperity of the Board during the

13 years' administration of Doctor Reynolds. In his recent report the statement has been published that \$21,000,000 has been available and spent during his administration, most of it Federal allocation, with no perceptible impact being made on the Legislature.

It is interesting to note that the \$21,000,000 available to the administration of Doctor Reynolds and spent during his 13 years in office is almost exactly three times as much as the total amount available and spent by all his predecessors in the entire 58 years of their combined service.

Without attempting to appraise the service of any of us who have helped pilot this old ship during the past 71 years, 34 of which I have spent continuously as a member of the executive staff, most of the time, like nearly all of my fellow employees, on a small and inadequate salary, I want to go on record, here and now, by saying that at no time in the past has a State Health Officer come to the kingdom better prepared by education, training and experience both in civilian work public health experience and in war work than Doctor Norton. He is just bound to make a great State Health Officer if each and every employee of the Board gives him his unselfish support.



Juanita Dianne Matheson, daughter of Mr. and Mrs. Clyde R. Matheson, Raleigh, N. C. Age 3 months, weight 12 pounds.

A LOOK AT DEGENERATIVE DISEASES

BY WILLIAM H. RICHARDSON

State Board of Health, Raleigh, North Carolina

Following his induction into office, on July 1, Dr. J. W. R. Norton, the new State Health Officer, made the following observation:

"Much has been accomplished through preventive medicine, to which Public Health is dedicated, in the control and prevention of many diseases, including those associated with and formerly fatal to childhood, also malaria, smallpox, typhoid fever and other human ailments, many of which have been all but eradicated.

"But," he continued, "humanity is still plagued with a major health problem, which manifests itself in the increasing number of deaths caused by what we term the degenerative diseases, which attack and kill mostly in middle and late life. Four of these, namely heart disease, apoplexy, nephritis and cancer, are responsible for more than half the deaths from all causes occurring in North Carolina at the present time."

From time to time, the public is advised as to the number of deaths from all causes, and from the various diseases that claim the lives of the people, special emphasis always being placed on the importance of immunization and other means of protection against those which are preventable or controllable. Smallpox, for example, is definitely preventable, and should a number of cases occur in any community, this fact would be publicized through every medium available to the State Board of Health—if necessary, an effort would be made to frighten the people to a sense of their responsibility.

On the other hand, there are diseases, for the prevention and control of which nothing has been discovered—diseases about which little is known, as to their origin or, definitely, how they are transmitted. Included in this list is poliomyelitis, or infantile paralysis, which reached epidemic form in certain areas

of North Carolina this summer. This is a disease about which little is known: it is not preventable or controllable through any methods presently known to science. While its cause has been established as a virus, methods of treatment have been developed which are proving beneficial, especially if the case is diagnosed early enough and the patient is hospitalized, we still know very little regarding methods of transmission.

As to the now unpreventable degenerative diseases that attack mostly in middle and late life, to which Doctor Norton referred, as constituting a major health problem, these present a distinct challenge, especially to the medical profession, and to the public, at large, where cooperation between physician and patient is necessary.

It might be well to review the figures, as recorded by North Carolina's Bureau of Vital Statistics on the "four horsemen of death" to which the State Health Officer referred, namely, heart disease, apoplexy, nephritis and cancer.

During the past ten-year period, that is, from 1938 through 1947, deaths from all causes in North Carolina numbered 304,874, of which 146,903 were attributed to the four causes above mentioned, in the following order: Heart disease, 62,531; apoplexy, 31,199; nephritis, 30,315; and cancer, 22,860, each group representing the equivalent of a good sized city, and of all four put together, the population of a metropolitan area larger than Charlotte.

Here we have an overall picture of the havoc being wrought by four non-preventable degenerative diseases toward which attention was directed by Dr. Norton, in his first public statement after assuming office.

It might be well to have a look at the progress of each of these human ailments, in North Carolina, over the past decade: but, first, let us consider, briefly,

the crude death rate, which was 9.6 in 1938, as compared with 8 in 1947, although the estimated population of the State during this period rose from 3,492,000 to 3,718,000. Stating it in numerical terms, 33,599 North Carolinians died in 1938, as compared with only 29,925 last year, despite the population increase indicated above.

During the period under consideration, there were, as previously stated, 62,531 deaths from heart disease alone, the rate having risen from 177.1 per one hundred thousand population to 201.7, while the number of heart deaths last year was 7,501, compared with 6,184 a decade ago. There may be various explanations, but none of these will be discussed here.

The increase in deaths from intracranial vascular lesions—called apoplexy, for the understanding of the lay public—has not been as great, the rate last year having been 90 per 100,000 population, as compared with the same rate in 1938. The nephritis death rate has actually decreased, having fallen from 86 ten years ago to 69.5 last year. Yet, this one of the "four horsemen" at least has held its place among the leading causes of death and combines with the other three in helping to claim more than half the people who die from all causes.

When it comes to cancer, there is a different story. The gains that apoplexy and nephritis have failed to make, have been more than taken up by heart disease and cancer, deaths from the latter last year having numbered 2,759, as compared with 1,914 a decade ago, while the rate during this period has risen from 54.8 per 100,000 inhabitants to 74.2—and, at that, the North Carolina cancer death rate is far below the national average, due to the fact that our high birth rate has kept us a State of comparatively young people.

Heart disease, apoplexy, and nephritis have not yet been brought into the group against which means for mass protection have been adopted. The best

that can be done under present circumstances, is for the individual in middle and late life to consult his or her family physician regularly for the detection of danger signals, or symptoms which will enable the physician to give—in many cases, at least—advice that will prolong life and ward off the otherwise inevitable. Of course, we must all die, at one time or another. The man who commits suicide, deliberately takes time by the forelock. On the other hand, the man who neglects to secure competent medical advice, is trifling with his life. At least, he is guilty of neglect. Whether such neglect be wilful or innocent, the end result is the same.

The tragic thing about human psychology is that it often takes the spectacular to bring people to a sense of duty toward themselves and their families. There is not a woman in North Carolina who would not take her baby across the State if she knew she could have it immunized against polio, which she cannot, at the present time. Yet, the same mother will often give no heed to those danger signals—correctible at first—which may make her baby an orphan.

We can and we are doing something about cancer, as evidenced by the State-wide program of the detection clinics now being opened up. It is too early to either appraise—or forecast in connection with—this undertaking, but there is every reason for encouragement. If the people can be aroused to a sense of the importance of early diagnosis and treatment, while treatment will bring satisfactory results, the war against cancer will gain an irresistible impetus that will lead to final victory.

Summed up, then, the new State Health Officer has pointed out one sound, fundamental fact: That, in human progress, we must often shift emphases, and above all, broaden our stakes.

**Total North Carolina Deaths With Rate per 1000 Population—Deaths from
Selected Causes with Rates per 100,000 Population, 1938-1947
(Place of Residence)**

Year	Estimated Population	Total Deaths (all causes)		Heart Diseases		Intracranial Lesions of Vascular Origin		Nephritis		Cancer and Other Malignant Tumors	
		Number	rate per 1,000	Number	rate per 100,000	Number	rate per 100,000	Number	rate per 100,000	Number	rate per 100,000
1938*	3,492,000+	33,599	9.6	6184	177.1	3144	90.0	3003	86.0	1914	54.8
1939	3,534,000	31,652	9.0	5455	154.4	3091	87.5	3445	97.5	2007	56.8
1940	3,571,623**	31,904	8.9	5938	166.3	3164	88.6	3433	96.1	2092	58.6
1941	3,571,623**	31,752	8.9	5978	167.4	2991	83.7	3273	91.6	2089	58.5
1942	3,569,804	29,414	8.2	5830	163.3	3055	85.6	2983	83.6	2249	63.0
1943	3,638,607	29,971	8.2	6182	169.9	3114	85.6	2973	81.7	2391	65.7
1944	3,531,567	29,390	8.3	6390	180.9	3103	87.9	2952	83.6	2328	65.9
1945	3,504,626	28,897	8.2	6456	184.2	3162	90.2	2910	83.0	2504	71.4
1946	3,640,645	28,370	7.8	6617	181.8	3027	83.1	2758	75.8	2527	69.4
1947	3,718,000	29,925	8.0	7501	201.7	3348	90.0	2585	69.5	2759	74.2
		304,874		62531		31199		30315		22860	

* Place of occurrence for 1938 only, other years by place of residence.

** Census.

+ 1937 estimated population.

Source of information:

1938-1945—Vital Statistics of the United States

1946 —North Carolina Annual report

1947 Provisional data

FOOD SERVING vs FOOD HANDLING

BY ALFRED MORDECAI, M.D.
City-County Health Department
Winston-Salem, North Carolina

The term "Food Handler" is rather loosely applied to any person who is engaged in the business of collecting, selling, preparing, or serving food.

Broadly speaking, these persons constitute a very large group in our present day social and economic setup. The group includes housewives, domestic servants, butchers, bakers, dairy workers, grocerymen, good venders of almost every kind, and of course, cooks, waiters and waitresses—in fact anyone who prepares and serves food, or anyone who sells ready to serve foods, such as confection shop clerks and operators.

There are Domestic Food Handlers who work in private homes. There are Public Food Handlers who are employed in our hotels, restaurants, tearooms, clubs, lunchrooms and all other types

of public eating places, including soda fountains, bar-B-que stands and snack joints.

In general all Food Handlers are highly important persons. If any group in our society should be clean, intelligent, healthy and alert, this group should be so at all odds, and their pay should be commensurate—the coal miner, the plumber and the fiddler notwithstanding.

In this day of "eating out," I would say, that the Number 1 need of this country is a school for training good cooks, for as the poet says,

"We may live without poetry, music, and art;

We may live without conscience, and live without heart;

We may live without friends; we may live without books;
But civilized man cannot live without Cooks."

The object of this article however, is to single out, discuss and condemn a certain class of Food Handler, who more than any other lives strictly up to what the term implies—to wit, Food Handler.

To handle food before it is cooked is one thing. To handle food after it is cooked is another.

For some years the nutritionists and Health Educators have stressed the needs of the so called "balanced diet." As a result of this teaching it has been the custom of all Americans to prefer or demand variety with every meal whether it be the main meal of the day, or a snatch lunch. The simple sandwich is passing out. It must now be a complicated, compounded, built-up affair with ground meats, hashed-up mixtures, or ham and cheese offset with vegetable relishes and mayonnaise dressing. Hence one observes food handling ad nauseam. The counter clerk fingers and handles everything—filthy money, cash register keys, hair, ears, nose, handkerchief, bread, lettuce leaves, devilled eggs, slices of tomatoes, strips of cooked bacon, sliced ham, sliced cheese, pickles and the like. The food articles mentioned are in various combinations compiled into sandwiches with many germs **incident to much fingering and adjustment.** Money, soiled handkerchiefs and the components of the sandwich are all handled with the same degree of carelessness and unconcern, with no thought of hand washing between the acts.

The term "Food Handler" apparently originated in the army about the time of World War I when all permanent cooks and Mess Hall workers in the regular establishment were subjected to frequent medical inspection to insure that these individuals were healthy and free from communicable diseases, particularly intestinal diseases, such as typhoid fever and dysentery.

The armed forces however, were quick to step on the vicious tactics of careless

food handling after the food had been cooked or prepared for serving. It changed from Food Handling to Food Serving. Those serving foods were trained to use forks, spoons, tongs, scoops and other serving implements. The fingering and unnecessary handling of foods after they were cooked was strictly tabooed. Crushed ice was handled with spoons or scoops. Meats and butter were served with forks. Vegetables were served with large spoons. Breads, muffins and biscuits served with tongs.

After the war, some of the army methods, such as Food Handler's examinations was carried over to civilian life. As a rule however, this work has been perfunctorily performed. As for Food Serving versus Food Handling little or nothing has been accomplished. Too many of our civilian Food Handlers are untrained. Some attempt is now being made to correct the situation, but the job will be slow unless the matter is given real life and impetus.

Food infections are far more common than is realized. They are passed by layman and physicians alike with careless terms, such as "intestinal flu," "just a common intestinal upset with diarrhea." It is true that most cases are mild, lasting but a few days, but if the days lost from work are considered it would be a considerable item as in the case of the "common cold." Unless there are sharp outbreaks in true epidemic proportion no one gives the matter any concern.

We should do away with the term "Food Handler" as applied to counter clerks and lunchroom employees. We should substitute the term "Food Server";—We must train Food Servers to use serving implements. We must educate the public to demand such service.

We should "can" such careless terms as "Intestinal Flu." We should call a spade a spade.

As far back as 200 years ago, and that antedates our knowledge of germs, Dr. Samuel Johnson, (LLD) of literary fame, could not tolerate a waiter using his fingers to drop a lump of sugar in his tea. On more than one occasion Dr.

Johnson flew into a rage and created a public scene because of this careless technique on the part of waiters. This fact was marked against him as evidence of his unbalanced nature, whereas the truth is, that he was far in advance of his time. It is too bad that there are not more like Dr. Johnson today. There would be fewer "intestinal upsets."

The Old Testament (14 Deut. 3) reads

as follows:

"Thou shalt not eat any abominable thing."

It would be well to likewise admonish that "Thou shalt not serve any abominable thing." Thrice fingered slices of tomatoes, ham, cheese and lettuce are certainly abominable when one considers all the other things the Food Handler handles without washing the hands.

NOTES AND COMMENT

BY THE ACTING EDITOR

A most important event in the history of Public Health occurred on July 1st with the inauguration of our new State Health Officer. The induction ceremony was impressive and was carried out in conformity with the following program:

Installation of Dr. John W. R. Norton as Secretary and State Health Officer

Time, Thursday, July 1, 1948, 10 A.M.

Place, Auditorium of the State

Laboratory of Hygiene

Doctor George M. Cooper, Assistant State Health Officer, Presiding

- (1) Call to order, followed by invocation by Reverend Doctor Howard P. Powell, Pastor of Edenton Street Methodist Episcopal Church
- (2) Brief review of Public Health History in North Carolina by Doctor Cooper
- (3) Presentation of Doctor Norton for formal induction into office by Doctor Hubert B. Haywood, resident member representing the State Board of Health
- (4) Administration of the oath by Chief Justice W. P. Stacy of the North Carolina Supreme Court
- (5) Remarks by Doctor Norton
- (6) Benediction by Doctor Powell

The newspapers of the State in their news stories and in their editorial columns did much to introduce Dr. Norton to the people of the State.

From the Rocky Mount Telegram

To Dr. Roy Norton, who today becomes State Health Officer, The Telegram extends its very best wishes. We nominated Dr. Norton as soon as Dr. Reynolds announced his intention to resign, although we had doubts that Dr. Norton's services could be procured. We were very much pleased later to learn that the State Board of Health had been thinking along the same lines and had actually induced Dr. Norton to accept the post.

Those who knew Dr. Norton while he was health officer in Rocky Mount realized that he was one in a million. He later distinguished himself at the University of North Carolina and then did outstanding work in the Army Medical Corps before going with the Tennessee Valley Authority as chief health officer.

We predict for Dr. Norton a brilliant regime as State Health Officer and we believe the people of the state will benefit greatly from his services."

From The News and Observer, Raleigh

NEW LEADER

Dr. Roy Norton, as he took over as new State Health Officer on Thursday, placed a proper emphasis upon the great health job which needs to be done against the great killers of our time—the degenerative diseases of middle age.

Public health has done, as Dr. Norton pointed out, a magnificent job in reducing the toll from the diseases of infancy and youth. The result thrown into the average has given us confidence in a longer life span. In many respects, however, the longer life span merely reflects the effect upon the average of infants who did not die. The middle years remain perilous. Indeed, as more people live to be middle aged the toll of cancer, heart disease, neuritis, and apoplexy becomes more apparent as well as more real. For the individual, reaching real old age is almost as doubtful a prospect today as it was in the past.

In many respects the job up to now has been a simple one in comparison with the job ahead. Sanitation has controlled many of the killers of communicable diseases. That could be done by mass measures which gave protection to everybody. But the diseases of middle age require most costly and more individualized treatment. They mean more hospitals. They require more doctors. Above all, perhaps, they require more money.

All these things depend upon a citizenship not only anxious to live but willing to give support to a public health program to prolong their lives. It may be easier to see the "public" aspects of a public health program which protects men from the communicable diseases of others in the mass than of one which must provide facilities for individuals. Actually, of course, the problem is the same though we move from mosquitoes to malignancy. Even the old publicly maintained pest houses were the hospitals of public despair. Once it seemed socialism to give a free vaccination to a child.

The problems of public health alter with its victories. New problems deserve new and vigorous leaders. Dr. Carl Reynolds and his predecessors have served North Carolina well. Dr. Norton by training and purpose promises well for the altering years ahead.

Public health in those years should include concern for everything which

promises better health and longer life for all the people—and for any of them. And in such a program Dr. Norton can count on the support of a State which is not tired of pioneering for people in terms of better and longer life for them all.

From The Raleigh Times

STATE GETS A CAPABLE NEW HEALTH OFFICIAL

In Dr. John William Roy Norton, a native of Scotland County, who Thursday assumed the duties of Health Officer for North Carolina, succeeding Dr. Carl V. Reynolds, retired, this State gets a well-trained, capable, experienced man to direct its important public health work.

Dr. Norton studied medicine at the University of N. C. and got his degree at Vanderbilt, has had practical experience as Health Officer for Rocky Mount, took the public health course at Harvard, was Assistant Director of Preventive Medicine with the State Board of Health, Professor of Public Health Administration at the University of N. C. School of Public Health, officer in the Army Medical Corps with special work in sanitation during the last war, and, just before becoming Health Officer for North Carolina, was chief health officer for the TVA.

It is a far cry from the \$100 a year appropriated by the N. C. Legislature of 1879 for the new State Board of Health which had been established two years earlier, with Dr. Thomas Fanning Wood, of Wilmington, as its first Secretary, to the almost three million dollars spent by that Board during the fiscal year of 1946-'47. Although less than one-sixth of this was contributed by the State of North Carolina—the rest by the federal government and private philanthropies—this great sum, when compared with the initial measly annual appropriation of \$100 gives some idea of the tremendous expansion of the health work in this State.

The N. C. Board of Health has been part of the State government in which there has been distinguished public

service. Even when North Carolina was giving the Board only \$2,000 a year and when its part-time Secretary served without pay, the public health work in this State was nationally known as some of the best pioneering in this field in this country.

The administration of Dr. Carl V. Reynolds, whom Dr. Norton succeeds, was marked by several notable accomplishments, especially the doubling of county health officers in the State, the increased control of venereal disease, and the establishment of the School of Public Health at the University.

With the good wishes and confidence of his fellow North Carolinians, Dr. Norton undertakes a public service of the highest value which has been expanded to great proportions for the public weal.

From the Greensboro Daily News

"In Dr. Norton the state has found a health officer eminently qualified to carry on where Dr. Reynolds leaves off. In training, in experience, in demonstrated qualifications, in knowledge of the state and its peculiar problems and conditions in realization of the responsibilities which are involved the new state health officer measures up. No one who has been chief health officer for the TVA can be lacking in vision.

We confess, however, that what we especially like about Dr. Norton is that he is a Tar Heel coming back home to work with, by and for his fellow citizens. There is cause for rejoicing when the trend of outgoing North Carolinians can be reversed and any of them can be brought back home where the harvest is rich, certainly in the challenge which it represents and the opportunity which it offers, and the laborers, in many constructive fields including health, have been decidedly few.

Dr. Norton takes charge when North Carolina is more health-conscious than ever before and when a program, aimed at remedying longstanding and costly deficiencies, is already under way. His leadership and his inspiration should

be valuable assets in that follow-through which will be the real test of this ambitious undertaking."

From the Winston-Salem Journal and Twin City Sentinel

"—The new State Health Officer enters upon his duties at a time when North Carolina is launching or preparing the most ambitious State-wide public health and medical care program possibly ever attempted by any state. In this program the State Health Department will play a vital role. Its activities must be closely related to the general program if the latter is to achieve a maximum of effectiveness. For the department to do this, the State and local units of the service must have fullest possible community and individual support.

Dr. Norton upon taking up his new duties as successor to Dr. Carl V. Reynolds, declared among other things:

"The administration of public health is a public trust imposing responsibilities on every individual regardless of his or her station in life. Disease shows no favoritism. It asks no quarter and gives none in its destructive work. Neither should we who are charged with the eradication and control of human ailments. . . . Public health to be successfully administered, must be all-inclusive in its scope and in its primary objectives."

North Carolina has come rather far in public health administration since 1879, when Dr. Thomas Wood of Wilmington was named State Health Officer on a part-time basis. The achievements of the health system in virtually eradicating diphtheria, typhoid, smallpox and other once terrible scourges and the general effectiveness of the continuing warfare against tuberculosis have in time attracted wide attention to public health progress in this State and have brought public health officials from other states and foreign countries into North Carolina to observe the methods pursued in preventing and fighting disease.

This program will receive fresh impetus under the new State-Wide health

and medical care set-up. It must move forward both with relation to the prevention and cure of disease. If it does, both the State and the local communities must carry their full share of the load of responsibility and meet all the obligations imposed by this "public trust".

POLIOMYELITIS — It is apparent that North Carolina is experiencing its worst epidemic of poliomyelitis. There is little that can be said that has not already been said about the control measures which can be inaugurated. Our knowledge of the disease has progressed considerably since our first epidemic in 1935. Unfortunately this increase in knowledge has not been sufficient to provide us with specific and effective control measures.

The following excerpts from current medical journals may help our people to understand the problem.

Lists 6 Rules to Guard Children Against Polio

Despite the lack of a definite preventive for infantile paralysis, parents may guard their children this summer by following a few simple rules. Dr. Hart E. Van Riper, of New York, says in the current issue of *Hygeia*, the health magazine of the American Medical Association.

Dr. Van Riper is medical director of the National Foundation for Infantile Paralysis and at one time served as a resident in pediatrics at Children's Hospital in Cincinnati. He has been connected with the National Foundation since 1945.

Dr. Van Riper listed these safeguards:

1. Practice cleanliness.
2. Avoid new contacts.
3. Don't get overtired.
4. Avoid chilling.
5. Don't swim in polluted waters.
6. Call your doctor at once.

"These are simple safeguards, but important; especially the advice to call your doctor at the first suspicious signs. Early medical attention is the best protection parents have against infantile

paralysis," Dr. Van Riper's article says, adding:

"An answer to the question of where infantile paralysis will strike this summer cannot be wholly relied upon. From studying the visitations of previous epidemics, it is evident that infantile paralysis moves in cycles with a four to six year lapse between epidemics.

"In attempting to guess where infantile paralysis may strike in this summer of 1948, we can see that the states along the Atlantic Coast, from South Carolina northward, have been relatively free from epidemics of infantile paralysis for the past four to six years. It is possible then, that the states along the Atlantic seaboard, from South Carolina to Maine, may experience a resurgence of virus activity.

"But whether outbreaks will actually take place and how severe they will be no one can be certain. Nor should there be any undue alarm in the areas named. All efforts have been made to safeguard these potential trouble areas.

"Severe infantile paralysis epidemics once seemed to be a problem peculiar to the American people and a few of the nations of Europe. Today infantile paralysis is considered a dangerous world health problem. The virus is evidently free from climatic restrictions. Cuba as well as Iceland has recently experienced epidemics. Nor has geographic remoteness been a barrier to the disease.

"Many foreign countries face infantile paralysis as a new health problem. It is to our interest as well as theirs that the knowledge we have laboriously accumulated be shared with them and that they in turn acquaint us with their experiences.

"It is for this purpose that the National Foundation for Infantile Paralysis is sponsoring the First International Poliomyelitis Conference to be held at the Waldorf-Astoria Hotel in New York City next week, beginning July 12.

"There is one problem which should take precedence over all others—'What is infantile paralysis?' We may be fight-

ing not one disease, but a whole family of only slightly related diseases.

"We do know already that there are many strains of infantile paralysis virus capable of producing the clinical symptoms. But we don't know how closely related these virus strains are, or, indeed, if they are biologically related at all; and we do not know whether special measures of prevention or treatment are necessary for each individual type.

"Until this problem is solved there can be no certain prevention or cure. Through the research studies now going on and through frank and open discussion such as will be possible at the First International Poliomyelitis Conference this and the other polio problems confronting us may be solved."

POSSIBLE SOURCES OF POLIO ANALYZED IN JOURNAL ARTICLE

Attempts to isolate the poliomyelitis virus from various extrahuman sources in epidemic areas formed the basis of an intensive study of 15,300 individual living specimens by three Michigan investigators, who report their results in the April 24 issue of *The Journal of the American Medical Association*.

The investigators, all from the Department of Epidemiology and Virus Laboratory, School of Public Health, University of Michigan, are Thoms Francis Jr., M.D., Gordon C. Brown, Sc.D., and Lawrence R. Penner, Ph.D. Their investigation was aided by a grant from the National Foundation for Infantile Paralysis.

According to the report, "the best evidence of the transmission of poliomyelitis at the present time supports a person to person transfer."

However, the authors caution, "one may not forget that the evidence was arrived at through processes of elimination rather than by scientifically approved experiments."

Stating that outbreaks of the disease are correlated with seasonal influences such as temperature, rainfall and the prevalence of animals and insects, the authors add that "it is difficult, if not impossible, in determining the trans-

mission of poliomyelitis, to rule out extra-human factors completely."

Their five-year study, in attempting to evaluate possible sources of the poliomyelitis virus, represents attempts to isolate the virus from various materials, research into serums in the hope of detecting antibodies for the virus in animals, and laboratory experiments with insects.

The specimens tested included 33 wild mice, 112 wild rats, three muskrats, four cats, one horse, chickens, hogs, and 43 pools of insects, 38 of which were flies. In addition, 24 samples of sewage, two of sludge, one of soil, 10 of water and three of milk were examined.

These specimens were collected during poliomyelitis epidemics and usually from areas near the patients afflicted with the disease.

Forty-six wild rats from epidemic areas of Buffalo and Detroit, after being examined to determine if they harbored the polio virus, were then tested for neutralizing antibodies. The serum of only one of these rats showed such a virus neutralizing capacity.

A mouse-paralyzing agent, which has not yet been identified, was isolated from a pool of wild rats caught in Fort Worth, Texas.

Speaking of the attempts to isolate the actual poliomyelitis virus in extra-human sources, the investigators state that "the possibility that some insect plays a role in the transmission of poliomyelitis remains the most likely of all, the extra-human prospects."

Of all the specimens tested, they state, only one—a genus of fly called *Sarcopaga*, taken from rural Tennessee—was shown to convey the poliomyelitis virus. In all other attempts to isolate the virus, the article said, the results were negative.

HOSPITAL VISITING—Nearly everyone who has had occasion to be in a hospital either as a patient, a physician or a visitor must realize that the visitors to hospitals create a serious

problem. Altogether too many of us have thought that nothing could be done about it. Several months ago the Community Council of Raleigh and Wake County decided that they would make an effort to remedy the problem in Raleigh's Rex Hospital. They prepared a statement which was carried by the local press and was presented to various and sundry groups and individuals. This has been followed by a marked improvement in the visitor

problem in that institution. Perhaps this improvement was a coincidence and was not due to efforts of the Community Council. However, other hospitals do have the visitor problem—it is possible that they and their patients might be benefited, if responsible groups in the State would follow the program of the Community Council of Raleigh. We are, therefore, presenting it to our readers for their thoughtful consideration.

HOSPITAL VISITING CREATES SERIOUS PROBLEM

Prepared by the Health Division of the Community Council of Raleigh and Wake County in cooperation with the local hospitals and medical profession.

The problem of hospital visitation has become so acute in recent years that an effort is being made by citizens of the community, administrative authorities of hospitals, and by physicians to take corrective measures to reduce the number of visitors to the hospital. The overwhelming number of hospital visitors create unhealthy convalescence for the patients and difficulty for hospital personnel in carrying out necessary work. The condition is not a local one, since virtually all hospitals throughout the country have the same problem. There are, of course, two ways of correcting the situation. One, by laying down strict rules concerning the number and time of visitors, and two, by education of the public. It has been the general opinion of a group of representative citizens making up a committee of the Health Division of the Community Council that the latter method of improving visitation is a better one. After a period of community education it is believed that hospital rules and regulations regarding visitors can be enforced with less misunderstanding.

Of course, the reasons for an overwhelming number of hospital visits are multiple, but, in general, they are due to the following:

1. High patient population.

2. Rapid increase in size of the community.
3. Easy accessibility to hospitals by local and rural visitors.
4. Disregard of visiting rules and regulations by visitors.

Hospital rules and regulations are created with the welfare of the patient alone in mind. With our local hospitals running at capacity load during the last five years, uncontrolled visiting has become a serious menace to the proper treatment and convalescence of our patients. The medical treatment of the sick by physicians and the natural restorative processes of the human body are definitely aided by rest and quiet. Every doctor has seen the recovery of his patients retarded by the commotion, the noises, and the mental burden of conversation that ordinarily result from the visits of well-meaning relatives and friends. The aim of the hospital to surround the sick person with an atmosphere of restfulness and peace is defeated—unintentionally, it is true—by visitors who come in the spirit of a good and kind neighbor.

Traditionally, sympathetic people have felt it a moral duty to visit and minister to the sick. In earlier days, visiting the sick was a necessary custom in order to prevent want or serious ne-

glect. In our less thickly populated communities today, it is considered the part of a good and kind neighbor to visit the sick and help in the home. This neighborly spirit lives today when hospitals have largely replaced the home for the care of the more seriously ill. Friends, neighbors, fellow-church members and other associates of the sick person feel that he should be shown some attention through a personal call. The spirit behind the visit is very commendable but the patient's opportunity for recovery is the first consideration.

In the modern hospital many very ill patients are brought together in limited space. A large number of trained attendants, each with definite duties to perform, has been provided to give adequate and solicitous care to these patients. There is little anyone outside the trained personnel of the hospital organization can do to help the sick person. On the other hand, the noise and confusion, the conversation, and the presence in restricted space, of visitors interfere materially with the rest and composure of the patient and often distract and delay the nurses and others in giving him the necessary care. So, finally, the sick person, instead of being benefited by his visitor, may be harmed to a marked degree.

The doctors consider this situation to be detrimental in the extreme to the welfare of the sick people who have come to the hospital for medical care in an environment of rest and quiet. They believe that the relatives and friends of the patients should know the harmful effects of too much visiting and desire to ask the cooperation of relatives, friends, fellow church-members, club-members, and the public generally in helping the hospital management to solve one of its most serious problems.

Examples of Misdirected Kindness

In one hospital on Sunday afternoons there is an average of five visitors for each patient. This means that at any one time during visiting hours there are 1500 visitors. A recent check showed that 6,000 visitors came to this hospital

in a single week.

On recent Sunday afternoons,—32 visitors were in a four-bed ward at one time, cigarette smoke filling the air,—35 girls visited their classmate at one time creating noise and confusion heard in the lobby.

On a recent Wednesday, 12 visitors at one time succeeded in getting into the room of an acutely ill patient whose door was posted with a "No Visitors" sign.

Parking areas around the hospitals are frequently jammed, blocking emergency entrances for ambulances and doctors. The halls are littered with paper, cigarette butts, and other debris discarded by visitors.

Visitors use the telephones at the nursing stations on several halls in the hospitals without permission, preventing essential and emergency calls by the doctors and nurses.

Even though very ill, the patient feels his responsibility to be a good host to his numerous visitors and is often exhausted mentally and physically by this enforced hospitality.

In one large hospital the number of hospital deaths are greater on Sunday night and on Monday than on any other days of the week. This is thought to be due to the weekend influx of visitors.

Visitors who stay too long make it impossible to give the patient his meals and medication on time.

As A Visitor You Can Help "Do's"

1. Send notes and cards whenever possible, instead of making personal visits. Patients like to receive mail.
2. Visit the hospital only during visiting hours. The nurses and other professional staff members have routine procedures to follow. These cannot be done when visitors are in the room or ward.
3. Stay only five minutes. Patients become exhausted from long conversations. Leave when other visitors arrive. There should not be more than two visitors with a patient at any time, as crowds are

tiring as well as noisy.

4. Pay attention to "No Parking" and "No Visitors" signs. "No Parking" signs mean that the space must be reserved for the physicians and ambulances. "No visitors" signs mean that it will endanger the patient's chances for recovery if he receives visitors.
5. Comply courteously with the requests of hospital staff members to limit your visit. They are carrying out the instructions of the physician in the best interest of the patient.
6. Get your information on the patient's room number and condition from the Information Desk.
7. Respect orders which have been given to hospital employees regarding the confidential nature of a patient's condition. Do not try to get information which is being withheld at the request of the physician or the patient's family.
8. Have church groups or clubs send one representative instead of urging everyone to visit the sick member. The representative can convey the good wishes of the group and bring messages from each.
9. Visit only relatives and close friends in whom you have a personal interest.
10. Use only the main entrance to the Hospital. The other entrances are provided only to facilitate the work of the hospital staff and employees.
11. Be cheerful and pleasant when visiting patients and when dealing with the staff. This attitude on your part will do much to brighten the day of everyone.
12. Let your friends know that you disapprove of promiscuous calling on sick people in hospitals. Explain to them the reason why.

"Don'ts"

1. Don't be a curiosity seeker for intimate and personal details about a patient's condition.
2. Don't visit casual acquaintances just to "get credit for a visit."
3. Don't go in to see a patient who already has two visitors in the

room. Wait in the lobby until they leave.

4. Don't sit on the patient's bed.
5. Don't smoke in wards. Smoking frequently irritates or nauseates those who are ill.
6. Don't smoke in a private room unless you are sure you are not disturbing the patient.
7. Never smoke where oxygen tents are in use.
8. Don't use the telephones on the halls at the nursing stations. These telephones are for doctors and nurses only.
9. Don't park your car where it will block the Emergency Room entrances or prevent someone else from getting out.
10. Don't bring children under 12 years of age to the Hospital. They are not permitted to visit and they should not be left in the lobby unattended.
11. Don't bring food to a patient without the specific permission of the nurse in charge.
12. Never use the Emergency or private entrances to the Hospital.
13. Don't throw cigarette stubs and other debris on the floor.
14. Don't forget that tomorrow you may be a patient.

As A Patient, You Can Help!

"Do's"

1. Ask your visitors to talk quietly so that they will not disturb others.
2. Play your radio softly.
3. Comply with your doctor's instructions.
4. Respect the rights and feelings of other patients. Remember that they may feel worse than you do.

"Don'ts"

1. Don't gauge your popularity by the number of visitors you have. Be glad that your friends are considerate enough to let you rest.
2. Don't suggest that your visitors disobey hospital regulations.
3. Don't ask for special services such as having your meals brought at odd hours. Think what would happen if all of the patients did this.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF AGRICULTURE

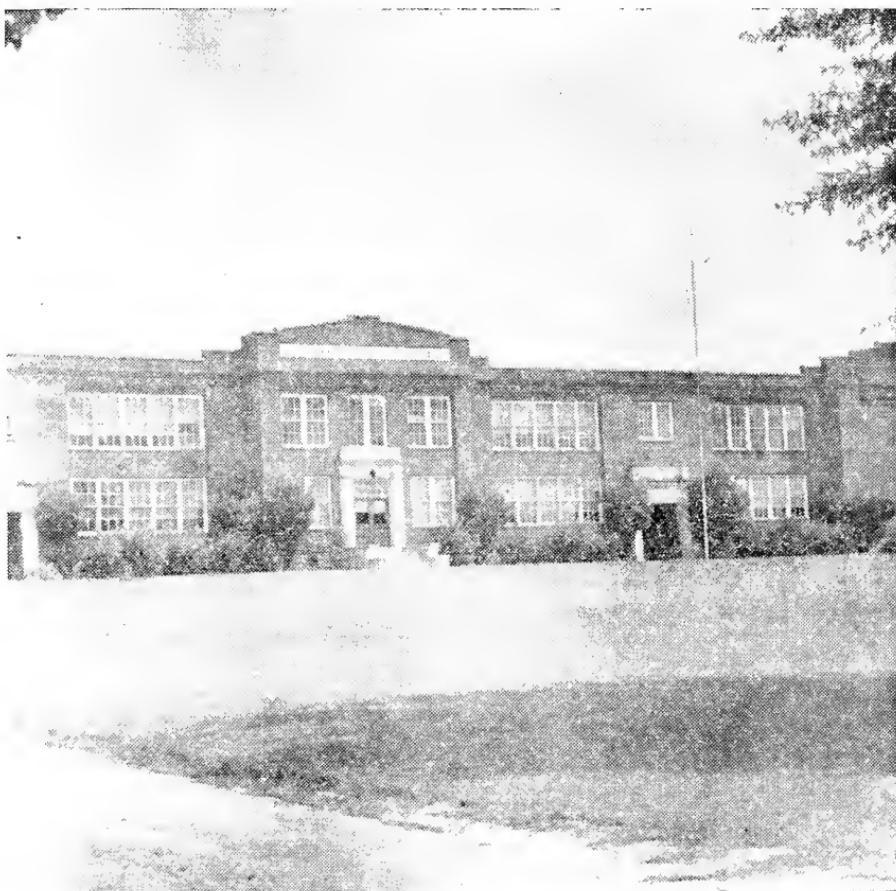
This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

SEPTEMBER, 1948

No. 9



GARNER HIGH SCHOOL, GARNER

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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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JOHN H. HAMILTON, M.D., Acting Editor

IMPROVING HEALTH THROUGH SCHOOL HEALTH EDUCATION

BY CHARLES E. SPENCER, CO-DIRECTOR
School-Health Coordinating Service

Introduction

North Carolina has accepted in theory the principle that it is the function of the *State* to provide for every child at public expense educational opportunities to develop his maximum potentialities. It is also recognized that maximum educational growth is impossible without consideration for the social, emotional, and physical as well as the mental aspects of growth.

The Need for School Health

In the public schools of North Carolina the mental and physical health of children has not been adequately emphasized. Facts to substantiate this statement can be found in abundance:

1. Children and adults continue to die from diseases that are preventable. However, notable progress has been made in preventing diseases that can be readily controlled through public health measures such as immunization, sanitation, water purification and pasteurization of milk.
2. A large percentage of school children have remediable defects. According to medical examinations of 35,000 high school students in 1942 approximately 90% were found to have some physical defects. While many of these defects may never be fatal, or may not measurably interfere with efficiency as citizens some constitute potential dangers in later life, while others reduce the quality

of life for the child and later the adult. Eighty-five percent of those examined had dental defects; 16% had defective vision and 14% had diseased tonsils. Malnourishment is a recognized problem among a large percentage of school children.

3. Accidents is among the ten leading causes of death among school children.
4. Non-communicable diseases, which can be controlled largely through intelligent action on the part of individuals are prevalent. Such diseases are more frequent in adults but habits, attitudes and information developed by the child will lead to the acceptance of individual responsibility by the adult.

Deaths from cancer, for example, can, in many instances, be detected and many deaths prevented by the individual's intelligent action in seeking qualified medical services to get diagnosis and treatment.

A School Health Program is Economical

The old adage "an ounce of prevention is worth a pound of cure" is true with respect to health education. North Carolina is economically too poor to care for all the physical and mental defective people that the State will continue to have so long as the conditions that cause these defects are allowed to exist.

In 1945 a committee of seven prominent physicians and educators from various parts of the country was appointed to study the need for a Medical School as a part of the newly organized Medical Care Program. One of the important recommendations of this committee, known as the National Committee for the Medical School Survey, stated that an adequate preventive program is basic to medical care of the citizens of the state.

This same thought has been expressed previously by the Committee on Medicine in the Changing Order of the New York Academy of Medicine. The latter group sees the establishment of an adequate program of preventive service as one of the fundamental steps in the development of any plan of health service for a state.

The most effective and economical way to cope with the tremendous problem of providing adequate medical and hospital care for those who can and those who cannot pay is to urge a vigorous campaign against ignorance, superstition and indifference.

It is not to be inferred from the above that we need any less medical and hospital care. Through education can be brought about a partial shift in emphasis of the type of service needed. At the present time a large percentage of our facilities and personnel, except the public health programs, are utilized in taking care of those who are defective or diseased. The shift in emphasis should be toward prevention.

Educational achievement has been seriously retarded because of physical or mental defects. Retardation in the public schools at the present time costs more than the estimated cost of an adequate health program. It is impossible to estimate the extent to which retardation is due to physical or mental defects, but reliable authorities agree that sickness and physical defects are responsible for much retardation.

Schools Need Cooperation from Other Health Agencies

Schools are not the only agencies or medium for health education. The problem must be attacked from all sides

and must be focused to reach all groups and all individuals. Health Departments and private physicians have important roles in health education. As a matter of fact a good school program is impossible without technical and advisory assistance from private doctors, dentists, psychiatrists, nurses and public health personnel.

An effective school-community health program is dependent upon joint planning and participation of the community groups concerned with the solution of health problems. The two official agencies responsible for health protection, promotion and education are the public health departments and the public schools. However, both of the agencies are dependent upon the moral and financial support of the community. An organization of some kind, a health council or some other group should be formed to assist in the planning of a total health program to avoid overlapping, duplication, competition and serious omissions in the total health services and activities.

School Responsibility for Adult Health Education

The schools, in the United States, provide a medium for reaching the total population. Even the adult population, especially parents, can be reached through children and through direct means. In 1947, the American Association of School Administrators made the following statement with regard to adult health education.

"The school is a community service agency. When it accepts as its principal purpose the strengthening and improving of community life, it becomes the center of the community's civic, cultural, and recreational activities. It is lighted every night. Here parents discuss and study their personal problems, the problems and needs of their community, and what goes on in the world about them; they try to read behind the news of the day; mothers study child care and home management; fathers use tools in the shops or compete with each other in the gymnasium; in many activities young people mingle with their elders. Here is the

meeting place of community councils, special committees, and social and civic clubs. Here are formed the plans for community action on a dozen fronts. Here the community discovers itself and forges its identity. Here the roots of community life are watered, and the delicate plan nourished. Already there are a few such schools. There will be more as schools increasingly accept their function of serving not alone the educational and recreational needs of the adults but their communal needs as well."

Minimum Essentials for an Effective School Health Educational Program

1. A healthful school environment which is safe and sanitary.

This means:

- a. Control of the physical environmental factors so that they contribute to, rather than deter from, healthful school experiences.
- b. Control of the emotional atmosphere so as to eliminate in so far as possible all conditions producing fears, conflicts, anxieties, and stresses.

2. Adequate protection from disease and conditions which interfere with proper growth and development.

This means:

- a. Adequate periodic health examinations by medical and dental personnel.
- b. Teacher observation and periodic teacher screening to detect signs of deviation from normal.
- c. Teacher and nurse referrals to medical, dental and psychiatric personnel for further health appraisal procedures.
- d. Follow-up procedures designed to acquaint parents and guardians with the needs for various health services.
- e. Up-to-date cumulative records of the health status of children including the defects found, defects corrected, and those under medical care as an essential feature of the health service and health instruction program.

3. Opportunities for children to realize their potentialities.

This means:

- a. Medical and dental care based on individual needs as revealed by the health examinations including the correction of remediable defects.
- b. A nutrition program to insure well-nourished children.
- c. A physical education program planned to meet the individual needs, capacities, and interests of children.
- d. A recreational program designed to create interest in activities to develop talents, provide for leisure time, and carry over into adult life.
- e. A balance in the child's daily activities which is in line with his physical, mental, and emotional needs.

4. Opportunity to learn to live healthfully.

This means:

- a. The opportunity to make decisions and form habits and attitudes based on scientific knowledge of health and disease.
- b. Opportunity for the child to become increasingly responsible for his own health.
- c. Opportunity to gain knowledge and acquire habits appropriate to grade level and to establish desirable and acceptable patterns of social conduct.

5. An adequate teaching personnel equipped by training, temperament, and health to give specific instruction and help children mature emotionally.

This means:

Teachers who are well prepared to teach, who practice democratic procedures, who are emotionally well adjusted because of their healthful personalities, and who are familiar with the health problems to be approached through education

Steps Necessary for a Good School Health Program in North Carolina

1. The Teacher Education Institutions need to provide more adequate pro-

grams of health for elementary and secondary teachers and for administrators.

- 2 Additional well qualified public health personnel must be trained and paid well enough to keep them in the field of public health in North Carolina.
3. Health must be more widely accepted by school officials as a vital phase of education. *More* time in the curriculum must be allocated for direct and integrated health instruction.
4. Funds must be appropriated by the State to pay for school health examinations and follow-up work.

During the two year period 1944-1946 only 109,661 of the approximately 800,000 North Carolina school children were reported examined by medical personnel of health departments.

5. Funds must be appropriated to improve the environmental facilities of the schools. Few schools have adequate light; toilet facilities in many are horribly inadequate; children are crowded in small classrooms; playground facilities are inadequate; drinking fountains are inadequate; handwashing facilities are either entirely absent or inadequate. Many counties are prohibited by law from issuing additional bonds. The solution may be an appropriation by the State and/or changes in the laws.
6. Additional health personnel on the State level is needed to work with local teachers, principals and superintendents in the development of school health programs.
7. Vigorous support from all agencies and organizations in the promotion of education for good health will go a long ways toward waging a successful war against ignorance, superstition and indifference in regard to physical, mental and social fitness and disease.

THE TEACHER SCREENING PROGRAM

BY ANNIE RAY MOORE, HEALTH EDUCATOR
School-Health Coordinating Service

Another school year is beginning and again it is time to determine the health status of the eight to nine hundred thousand school children in the schools of North Carolina. There are many ways the classroom teacher may find out "where we are" so far as the health status of the individuals is concerned. One of the most important of these is the "teacher screening" technique.

"Teacher screening" is the inspection of the child by the teacher to find defects and deviation from the normal of physical factors such as vision, hearing, height, weight, posture, teeth and nutritional status. This is an accepted procedure in the other states as well as in North Carolina. The idea of having the nurse do all the screening is outmoded. There are many advantages to having the teacher do the screening. She should do it because of these ad-

vantages and under no circumstances should she think of screening as a task imposed upon her.

The teacher must know the health status of the children if she is to help plan the health program to meet their needs. She learns those needs best when she helps to identify them. This "finding needs and problems" should go one step further to include child participation in the screening program. Of course, the child will be in it, but it is of most value when he helps, knows what is being done and why.

No teacher can deny the fact that most all children are interested in the results of an appraisal of their own health. Likewise no teacher can deny that she can "screen" the child through all the phases of the program—weighing, measuring, hearing, vision, posture, dental, skin, scalp, nutritional status—without learning a great deal about

that child which otherwise would take a long time to obtain if she ever obtained it.

It is important to find remediable defects as soon as possible so as to begin follow-up work immediately. Such remediable defects become increasingly more serious the longer they remain uncorrected and of course are more expensive to correct.

The teacher screening program is the first step in the health services program and is an important phase of the health instruction program. The teacher consults with the nurse about those children she screens out for further inspection and for examination. The nurse in turn inspects these referrals and recommends that part or all of them be referred to the physician (family doctor or health officer) for diagnosis and recommendation of treatment.

As is indicated in the above discussion, the teacher and the nurse do not make the diagnosis. They both recognize that something is wrong but refer the child to the physician to say what is wrong and what should be done about it.

The total screening program includes the formal health appraisal, daily observations, history of illnesses, consideration of absences from school on account of illness, and the up-to-date cumulative health record showing the defects found, those corrected, those children under medical care and any other pertinent health information about the child.

Before beginning such a program it is the teacher's responsibility to inform herself as to the best procedures and methods to use. There are many excellent sources that may be consulted for such information and instruction. One of these is the "Manual of Screening and Medical Examination of Elementary School Children" prepared jointly by the State Department of Public Instruction and the State Board of Health and will be available to every teacher for the first time this year. Copies of this manual are being distributed to all North Carolina teachers

through the city and county superintendents. Additional copies, in the event they are needed, may be secured from the School-Health Coordinating Service. The "Health Appraisal Forms" on which teachers may record the results found in the screening procedures may be purchased from the School-Health Coordinating Service at the rate of \$2.50 per 1000.

The screening manual presents a recommended plan for observation, inspection and medical examinations of school children and the reasons for having such a plan including reference to the public laws authorizing its preparation and distribution.

The major part of the manual is concerned with the teacher's part, the detailed methods, procedures equipment, and time most opportune for carrying out the screening program. Even though specific time, equipment, and procedures are suggested, each teacher has a responsibility to adapt these so as to make them most effective in the situation in which she is working. Each teacher should consult with the nurse in her district and decide on whatever plan will best suit in her situation. Such plan may be to completely screen each child and then move on to the next. Or she may screen each pupil through one phase such as the vision testing and then take up another phase with each pupil. Or she may use a combination of these depending on local conditions and events. Whichever plan is decided upon, the children should actively participate in the screening so that they feel secure and happy participating in these procedures. It is to these teachers that the nurse has the greatest responsibility. She can help the teacher to find those signs which indicate a deviation from the normal. Here the nurse becomes the teacher of the teacher. The teacher learns to recognize these symptoms more readily the more observations she makes and the more informed she becomes.

Just as is true in any survey, observation, or test of any kind, the screening is of little value unless there are

follow-up measures. Those suspected cases are referred to the nurse and physician. The presence of the parents during the medical examination is indispensable in securing their interest and understanding of the necessity for correction of defects found. The teacher is informed of the diagnosis and recommended treatment so that she may follow-up with a program in line with the diagnosis and treatment. Such follow-up may include health education and instruction, aid to the nurse in informing the parents to secure correction of defects, and use of available resources to correct defects and improve the health of children of parents classed as medically indigent. The teacher is responsible for keeping an

up-to-date cumulative health record for each child. The health follow-up program, in addition to meeting the needs of the so-called normal children, should meet the needs of the physically and mentally handicapped by guiding them into a program of living that will make it possible for each to live the fullest and contribute most in spite of and along with his handicaps.

To improve the health of the child, the teacher must have a genuine interest in that child's personal health and the child must feel that she has that interest. The screening program offers a good opportunity for the teacher to show the child that she has his health interest at heart.

PROBLEMS OF HIGH SCHOOL GIRLS' INTERSCHOLASTIC ATHLETICS

BY RUTH O. MOORE, ADVISER IN HEALTH AND PHYSICAL EDUCATION
School-Health Coordinating Service

School bells are ringing, doors opening and approximately 150,000 high school boys and girls in North Carolina are answering the call of that first bell. Among the many questions which are in the minds of some of these high school boys and girls is this—"What kind of teams will we have this year?" "Will we win?" These questions concerning teams are not only in the minds of the students but also the administrators. It is generally admitted that there are many problems with regard to interscholastic athletics for boys and girls. However, the paramount question considered here isn't the boys varsity interscholastic athletics but the girls varsity interscholastic athletics. The aged-old problem of interscholastic vs. intramural athletics for girls is with us again.

In order to clarify the meaning of interscholastic and intramural athletics the following definitions are made. Interschool or interscholastic athletics are generally considered those activities which are played between different

schools in different sections of the county, city or state. Intramural activities include those activities conducted between groups of students within one school. This type of athletic program also provides opportunities for students to participate in sports after school hours and should be regarded as an integral part of the physical education program. The purpose of intramural athletics is to encourage participation because of an interest in an activity and because of the pleasure resulting. Its goal is to reach every girl who is interested in a sport.

At the present time competitive interscholastic athletics for girls are increasing in North Carolina. This is due to several factors. Mainly the impetus which is given by our increased economic levels. People have more money to spend to attend sports events. Pressure is put on the schools to have more games and to put out winning teams regardless of the cost to the health of the girls. Control of the athletic games in many past instances has been taken

out of the hands of the school administrators by local organizations interested in making money. Local clubs and civic organizations sponsor tournaments in basketball for girls with teams invited to participate within a radius of as far as 100 miles. What happens is that girls play in from one to three invitational tournaments within one season.

A great many schools lack facilities and personnel to conduct a well-rounded physical education program and intramural program. Therefore, the teacher's time and facilities are devoted to the few because the "varsity" must practice. The varsity team in most cases is composed of the very select few whom the coach thinks will be winning material.

Most of the girls' athletic programs are planned and conducted along the same line as the boys. This is most undesirable since the girls should have a program based on their own needs and interest. For this reason in most localities basketball constitutes the major and most times the only girl's sport offered. One of the first charges then against this type is the narrowness of the program. Many of the schools play as many as forty to fifty basketball games in a season. This means not only starting the season early but of necessity a team with such a schedule must play at least two games per week and quite often the third game is sandwiched in.

With such a heavy schedule of games there is bound to be an overstimulation in this area, with their activities limited in other social and physical areas which are so vital to the development of the "whole-girl." Balanced living is an impossible goal for these girls and the emotional and physical health is threatened by such practices. With increased pressure from outsiders to win, and the increased personal desire, great strain, stress and anxiety are experienced. Their physical health is threatened due to irregular sleeping habits which is bound to result from "out of town trips," irregular eating habits, and increased fatigue. In the majority of

cases the girls games are played in connection with the boys games and scheduled at night. There is a definite feeling that it is undesirable to stage girl's basketball games in connection with boys', particularly for the reason that the girls' games serve as a curtain raiser or as an interlude for the boys game. Girls' games should not be staged for the enjoyment of spectators, gate receipts, or the reputation of the school and yet this is found to be true in many places.

Another charge against girls' high school athletics is poor health habit practices. Many teams play an entire season and never have a physical examination which is so essential for the health of the girl. Quite frequently girls are allowed to participate in activities which are entirely too strenuous and may be detrimental to their health. The gymnasiums, shower and locker rooms are inadequate and those that are provided are not cleaned frequently enough. Other aids to cleanliness and health, such as warm water, soap, towels and adequate dressing rooms are not provided.

Recognized authorities have made recommendations concerning policies controlling high school girls' athletics. In a report of the National Committee on School Health Policies, Suggested School Health Policies, the following statement was made: "The health and welfare of students should be the primary consideration in planning and conducting athletic programs in secondary schools. To protect health of competing athletes, the following policies and procedures are recommended: Interschool competition for girls should be limited to invitational events, chiefly in the form of sports days and playdays where mass participation is emphasized; all girl's athletic activities should be taught, coached, and refereed by professional prepared women leaders, and should be divorced entirely from any interscholastic athletic contest for boys." The Society of State Directors passed a resolution at the National Meeting in 1946 to the effect that interschool competition for girls should be

limited to invitational events, chiefly in form of sports days or playdays where mass participation is emphasized. The national section of Women's Athletics of the National Amateur Athletic Federation of America whose purpose it is to promote healthful and desirable athletic programs for girls and women of all ages, and all walks of life recommends that girls athletic programs be based on the following platform:

1. Promote such programs of athletic activities for girls and women as shall meet their needs, and as shall stimulate interest in activities that are suited to all ages and capacities.
2. Promote competition that stresses enjoyment of sport and the development of good sportsmanship and character rather than those types that emphasize the making and breaking of records and the winning of championships for the enjoyment of spectators or for the athletic reputation or commercial advantage of institutions and organizations.
3. Promote interest in awards for athletic accomplishment that have little or no intrinsic value.
4. Promote educational publicity that places the emphasis upon sport and its values rather than upon the competitors.
5. Promote the use of proper and suitable costumes for the various athletic activities.
6. Promote the provision of sanitary and adequate environment and facilities for athletic activities.
7. Promote the apportionment of adequate time allotment for a physical education program such as shall meet the needs of the various age groups for growth, development, and the maintenance of physical fitness.
8. Promote the training and employment of women administrators, leaders, and officials who are qualified to assume full responsibility for the physical education and recreation of girls and women.
9. Protect the health of girls and women through the promotion of
10. Protect athletic activities for girls and women from the danger attendant upon competition that involves travel, and from their commercialization by interest in gate receipts.
11. Promote the general adoption of approved rules for the conduct of athletics and games for girls and women.
12. Promote the study of the existing rules of all sports activities to the end that they may be changed to become adapted to the specific needs of girls.

There is no doubt that girls should take part in some form of competitive athletics but these should be in the form of Sports Days or Playdays. This type offers social and recreational aims as well as the aim of providing competitive play. Competition in this form is never competition between two "varsity teams" made up of carefully selected best players in two opposing schools. Instead a large number of teams from a school play an equal number of teams of one or more other schools. Besides the enjoyment of participating in competitive sports and games many social objectives are achieved. Thus it becomes a medium for many learnings in courtesy, consideration of others, social awareness, development of sportsmanship, planning skills and self direction while providing girls with additional opportunities to compete with others in ways that have values for them.

It is time for us to stop and think which way we want our girls athletics to grow. Do we want them to continue in the old way of providing athletics for the chosen few? Do we want to begin improving and directing them in a more healthful program of athletics which in the end results in "A sport for every girl and every girl a good sport."

HEALTH EDUCATION WORKSHOP

Chapel Hill, North Carolina — June 11 - July 20, 1948

BY ANNIE RAY MOORE, HEALTH EDUCATOR
School-Health Coordinating Service

On the eleventh of June 54 seemingly timid, tired teachers and principals assembled in one of the classrooms in the basement of the high school building at Chapel Hill. This group was a little skeptical of this workshop to be carried on without hammer, saw, or nails. But it was not too long before they were familiar with the characteristic workshop jargon such as group work, steering committee, areas of interest, progress reports, group participation, and consultants.

These 54 participants represented 30 counties and 39 administrative school units of the state. There was a pretty even representation from all grades, high school, and administrative groups.

Many of these participants came with some definite health problem in mind on which to work. Others chose problems after several days of orientation, explanation, and introduction to different areas of interest.

To try to meet the needs of each individual represented, the planning committee, which had been chosen by the participants, helped the staff to work out a program which included basic instruction periods, time allotted to group work on areas of choice, guest lecturers to introduce the resources available, physical education activities, some clinic work, time for individual conferences, arrangement of library materials, film reviews, and field trips.

Each participant was a member of one of the several committees to which much of the work was allocated. The social committee made the necessary arrangements for many enjoyable events. It was conceded that these events did much to improve the mental and social health of the group. Other committees could be commended equally as favorably for their work.

It was the conclusion of both participants and staff members that the

participants broadened their vision and "raised their sights" during the workshop period. They were searching to find help in working out a practical program of health suitable for use in their own particular schools and communities during the coming school year. But they were seeing this practical program as an important and necessary step in a long range plan which would extend beyond their own community, state, and nation to a world health program.

After experiences with small group discussions with a chairman and secretary, committee work, a town hall meeting, a series of E.R.P. meetings and clinic sessions, a sociometric test, a health council meeting, different types of progress reports, physical examinations, chest X-ray, audiometric tests, film reviews, physical education activities, field trips, lectures, evaluations, and numerous other activities, these 54 teachers and principals left Chapel Hill a very enthusiastic group of individuals. It was only short of amazement that such excellent morale was sustained during the entire six weeks period in spite of the very warm weather and the heavy schedule at times.

Advisory Committee

Arrangements had been made during the winter to set up this workshop under the sponsorship of the University of North Carolina and the School-Health Coordinating Service. This was done by the help of an advisory committee composed of:

Dr. Lucy Morgan, Director, Department of Health Education, School of Public Health, University of North Carolina, Chapel Hill, N. C.

Dr. Carson Ryan, (Former) director of Department of Health Education, University of North Carolina, Chapel Hill, N. C.

Mr. Guy Phillips, Director of Summer School and Dean of School of Education, University of North Carolina, Chapel Hill, N. C.

Mr. O. K. Cornwell, Director, Department of Physical Education, University of North Carolina, Chapel Hill, N. C.

Mr. Charles E. Spencer, Co-Director, School - Health Coordinating Service, State Board of Health, Raleigh, N. C.

Financial Assistance

This workshop was assisted financially by the State Board of Health, the North Carolina Tuberculosis Association, and the North Carolina Division of the American Cancer Society. Each participant in the workshop was awarded a scholarship in the amount of \$85.00.

Along with the above agencies many organizations and groups contributed many valuable materials and assistance in other ways to make this workshop the success that it was.

Staff and Consultants

The direction and guidance of the workshop activities were by a competent staff and consultants made up of the following people:

Mr. Charles E. Spencer, Co-Director, School - Health Coordinating Service, Raleigh, N. C.

Dr. C. P. Stevick, Co-Director, School-Health Coordinating Service, State Board of Health, Raleigh, N. C.

Miss Elizabeth McHose, Director, Health and Physical Education, Reading, Pa.

Dr. A. T. Miller, Professor of Physiology, University of North Carolina, Medical School, Chapel Hill, N. C.

Miss Ruth O. Moore, Adviser in Physical Education, School-Health Coordinating Service, Raleigh, N. C.

Dr. R. M. Fink, Consultant in Mental Hygiene, School - Health Coordinating Service, Raleigh, N. C.

Miss Sarah Walker, Health Educator, Catawba - Alexander - Lincoln Health District, Newton, N. C.

Miss Pearl Weaver, Nurse, School-Health Coordinating Service, Raleigh, N. C.

Mr. Simon McNeely, Specialist in

Health Instruction and Physical Education, U. S. Office of Education, Washington, D. C.

Miss Mabel Todd, Nutritionist, State Board of Health, Raleigh, N. C.

Mr. O. K. Cornwell, Director, Department of Physical Education, University of North Carolina, Chapel Hill, N. C.

Dr. Eva Dodge, Professor of Gynecology, School of Medicine, University of Arkansas, Little Rock, Arkansas.

Mrs. Annie Ray Moore, Health Educator, School-Health Coordinating Service, Raleigh, N. C.

Dr. W. H. Peacock, Department of Physical Education, University of North Carolina, Chapel Hill, N. C.

Visiting Lecturers

The following were guest lecturers for one or more sessions of the workshop:

Dr. Carson Ryan, Director, Department of Education, University of North Carolina, Chapel Hill, N. C.

Dr. Lucy Morgan, Director, Department of Health Education, School of Public Health, University of North Carolina, Chapel Hill, N. C.

Dr. W. B. Perry, Department of Education, University of North Carolina, Chapel Hill, N. C.

Dr. Dorothy McCusky, Department of Education, University of North Carolina, Chapel Hill, N. C.

Dr. Frances Horwich, Department of Education, University of North Carolina, Chapel Hill, N. C.

Dr. J. W. Roy Norton, State Health Officer, State Board of Health, Raleigh, N. C.

Dr. Carl V. Reynolds, Former State Health Officer.

Dr. E. A. Branch, Director, Division of Oral Hygiene, State Board of Health, Raleigh, N. C.

Dr. O. David Garvin, Health Officer, Orange - Person - Chatham - Lee Health Department, Chapel Hill, N. C.

Dr. E. H. Ellinwood, Health Officer, Catawba - Lincoln - Alexander Health Department, Chapel Hill, N. C.

Dr. William Wolfe, Professor Special Education, University of North Carolina, Chapel Hill, N. C.

Mr. Frank Webster, Executive Secretary, North Carolina Tuberculosis Association, Raleigh, N. C.

Mr. Charles A. Milner, Associate Director, University Communication Center, University of North Carolina, Chapel Hill, N. C.

Mrs. Rosemary Kent, Education Director, North Carolina Division of American Cancer Society, Chapel Hill, N. C.

Mr. R. R. Morgan, Superintendent, Mooresville City Schools, Mooresville, N. C.

Participants

Listed below are the names and addresses of the participants of the Workshop and the county each represented.

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Jessie Baxter, Fallston, N. C. Cleveland.

H. C. Bowers, Middlesex, N. C. Nash.

Mrs. Patty J. Bynum, 308 McCauley St., Chapel Hill, N. C. Orange.

Fannie Lee Carter, 200 S. Grace St., Rocky Mount, N. C. Nash.

Silvio Caruso, Box 201, Tabor City, N. C. Columbus.

Constance A. Champion, Box 365, Mooresboro, N. C. Cleveland.

Curtis Crissman, Whitakers, N. C. Nash.

Russell V. Day, Harmony, N. C. Iredell.

Nedra Deans, Route No. 1, Black Mountain, N. C. Person.

Clarice L. Duncan, Route No. 3, Siler City, N. C. Chatham.

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Ila Harward, 119 S. Broome Street, Albemarle, N. C. Stanly.

Anne Hobson, 135 Mocksville Avenue, Salisbury, N. C. Rowan.

Elgia Hocutt, 611 Mocksville Avenue, Salisbury, N. C. Rowan.

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William A. Hough, Bladenboro, N. C. Bladen.

Mrs. Sheila T. Howard, 321 E. Church St., Laurinburg, N. C. Scotland.

Mrs. E. N. Howell, Swannanoa, N. C. Buncombe.

Lucille Hunt, Oxford, N. C. Cabarrus.

Louise Hunt, 110 Colonial Avenue, Greenville, S. C. Randolph.

Flora Irby, Wakulla, N. C. Cumberland.

Ruth Johnson, Mount Airy, N. C. Cumberland.

Hilda Judd, 15 Hillsboro Apartments, Raleigh, N. C. Rowan.

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Ruby Morrison, Stony Point, N. C. Iredell.

Sallie Murphy, Salisbury, N. C. Rowan.

Addie Lee Myers, Route No. 2, Thomasville, N. C. Cabarrus.

Rachel Perkins, Route No. 1, Goldsboro, N. C. Robeson.

Mildred Perry, Wingate, N. C. Wake.

John Rackley, Apartment L-6, Sunnyside Homes, Winston-Salem, N. C. Forsyth.

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Margaret Ratterree, Kings Mountain, N. C. Buncombe.

Errol Kemp Reece, Jonesville, N. C. Yadkin.

Thelma Shepherd, Crumpler, N. C. Ashe.

Grace Smith, 523 S. Third St., Smithfield, N. C. Wake.

Phyllis Terrell Parham, 38 Orchard Street, Asheville, N. C. Buncombe.

Mary Thomas, Cameron, N. C. Moore. Verona West, 176 Pine Street, Mount Airy, N. C. Surry.

Edith Womble, Wagram, N. C. Robeson.

Thomas H. Yarborough, Leakesville, N. C. Rockingham.

AND THEY LIVED HAPPILY EVER AFTER

By R. M. FINK, CONSULTANT IN MENTAL HYGIENE
School-Health Coordinating Service

Once upon a time there was a handsome prince who lived next door to a beautiful princess. Of course, they fell in love and were married. At the wedding their fairy godmother cast a spell on the couple so that the rest of their lives each would know how to understand himself and how to get along with other people.

And they lived happily ever after.

Today, we cannot help people to an understanding of themselves and others by waving a magic wand. We must take the more difficult course of education.

Children are not born with the ability to read; they must be taught to read. Nor are children born with the ability to live happily with other people; they must be taught the skills of human relations.

Since September, 1947 the School-Health Coordinating Service, with the financial support of a philanthropic foundation, has been offering services in mental health and human relations to the public schools. As these services to schools are developing, advice is being sought from teachers, psychiatrists, public health officials, and lay people in many states. The suggestions of these persons have aided in the formulation of principles which are guiding the developing program.

1. The major emphasis for the program shall be a positive effort toward the development of the personalities of all children and toward the prevention of personality maladjustments. While the clinical approach to seriously maladjusted

children will not be ignored, this is a secondary consideration.

2. In the schools, the key figure in a sound program for mental health is the teacher. Therefore, the main efforts of the School-Health Coordinating Service shall be directed toward the in-service training of teachers. These efforts must be complemented by active efforts on the part of the teacher training institutions to offer training in mental health practices and to apply principles of mental health in all professional courses.
3. Attitudes and behavior of children are shaped during the pre-school years and continue to be influenced by the home and many community agencies. Therefore, cooperation must be extended to and actively sought from the home and community agencies.
4. A program to help teachers, parents, and children to alter long established ways of thinking and acting can be developed only over a long period of time. Any inclination to develop a hasty, superficial program must be avoided.
5. Communities, like people, have personalities. It seems unwise to outline a definite state-wide program for mental health in the schools. Local initiative and local conditions should determine the local programs.

When the first limited services were offered to the schools, in September 1947, it was anticipated that a year

would be required for awakening interest. By May, 1948, the requests for services were just short of overwhelming. The following activities are examples of developments during the first eight months of the experiment.

1. Several school systems are planning programs to aid children who do not adjust readily to the large groups of the regular classes.
2. A number of meetings have been held for teachers to aid them in exploring the meanings of mental health.
3. Several meetings, sponsored by schools, have been held for parents to encourage joint action by homes and schools.
4. Films have been purchased for use by parents, teachers, health department personnel, and in the classroom.
5. Schools are being aided in initiating classes in human relations.
6. County-wide workshops are planned for the school year 1948-49. These will result in the collection and organization of teaching materials.
7. A series of bulletins is being prepared to acquaint parents with some of the emotional and social problems of school children. The first of these, "Betty Jean is Ready for School," has been used experimentally by the Concord City Schools. Single copies are available free from the School-Health Coordinating Service. Quantities may be secured at cost.
8. Several schools are planning study for parents in child development, family life, or sex education.
9. The Sanford City Schools, in co-operation with many community agencies, have initiated a program for family life education. When fully developed this will include: study groups for parents—in the churches, in the P.T.A., in meetings of civic organizations—and a learning program through the twelve years of the public schools.

10. Teachers in the Aycock School (Greensboro) have undertaken to learn four techniques for understanding children: (a) to recognize children's problems, (b) to collect information about children and their problems, (c) to interpret this information, and (d) eventually to cooperate with other agencies in helping children to solve their problems.

Through activities such as these we believe that we can help children to grow in self-understanding and ability to work with others so that more and more we can have the story-book ending—

And they lived happily ever after.

In the health of the people lies the strength of the nation.—Gladstone



Rebecca Nan Thompson, daughter of Mr. and Mrs. Garth Thompson, Hayesville. Mrs. Thompson has been a Public Health Nurse in Clay County.

SECOND YEAR PERIOD OF ADJUSTMENT FOR BOTH MOTHER AND BABY

"Significant behavior disturbances in babies are relatively infrequent during the first year of life as compared with the second," according to Dr. Benjamin Spock, Rochester, Minn., in *The Journal of the American Medical Association*.

Feeding problems are most common during the first year while the second year brings pronounced changes in an infant's personality and behavior and calls on the mother for entirely new resourcefulness and adaptability.

During the first year the mother has become accustomed to baby's automatic cooperation, but at about a year the infant moves independently. He explores constantly; his ego is taking definite shape; he senses that he is a separate person and is entitled to wishes and a will of his own.

"As he becomes more insistent on his independence from his mother, he simultaneously becomes aware of his dependence," the doctor writes. "Undoubtedly, it is part of his total pattern of emotional development that when he has the ability and the desire to explore away from his mother he also has the instinct to hurry back to her noisily when he meets something strange and potentially dangerous."

More feeding problems begin during the second year than during any other period. The irritation of the frustrated mother and the balkiness of the child easily spread into other aspects of their relationship.

"Psychiatrists," Dr. Spock continues, "have stressed the danger to the child's emotional development of too early and too rigorous toilet training. Pediatric observation would indicate that the earliness at which training efforts are

begun is much less important than the reaction of the child and the attitude of the mother during the precarious second year.

"If the mother is a stable, affable sort of person, she finds ways to get along with this new child, even if she has to go against current dogma on diet, toilet and discipline. But the insecure or the dominating mother is easily thwarted.

"Although the pediatrician cannot hope to change the mother's basic nature, I believe he can give her advice that minimizes the clashes. He should explain at the start that the baby will be a better judge than mother or pediatrician of how much he needs at each feeding, warn the mother when starting solids to give the child time to get used to them and advise against weaning until the child shows readiness, even though it is not until the middle of the second year."

In conclusion Dr. Spock states "we need also experimentation with some sort of guidance nursery or guidance playground where one and two year old children, too young to be left at nursery schools, could come to play. Their mothers could look on, learn from each other and have the opportunity when they felt the need to ask advice from an expert nursery school teacher or psychiatric social worker in attendance."

Dr. Spock agrees with a number of pediatricians who advocate placing the new baby in the room with the mother rather than relegating it to the hospital nursery. This system, now being tried experimentally in Detroit and New Haven, helps to familiarize the parents with the baby.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

OCTOBER, 1948

No. 10

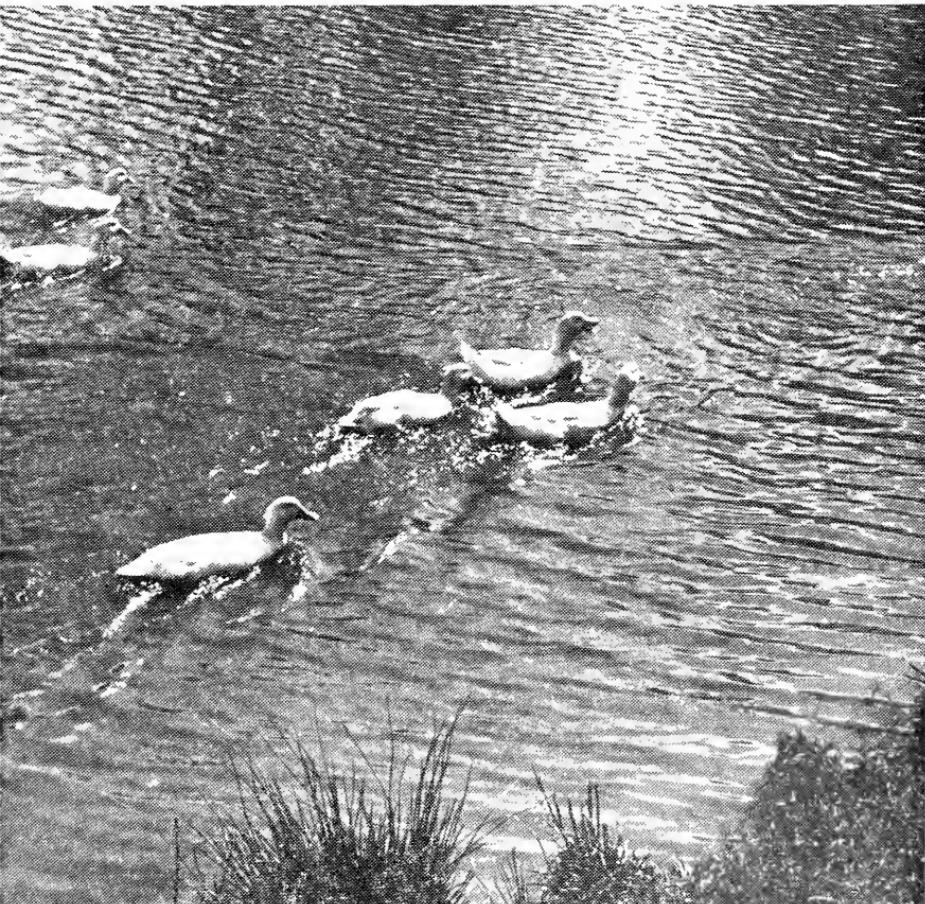


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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
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Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
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Don't Spit Placards	Pediculosis	Vitamins
Fly Placards	Pellagra	Typhoid Placards
Endemic Typhus	Residential Sewage	Water Supplies
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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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Health Bulletin



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J. W. R. NORTON, M.D., M.P.H., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

TWELVE AREAS FOR HEALTH EDUCATION

By C. P. STEVICK, M.D., M.P.H., Co-DIRECTOR
School-Health Coordinating Service

Selections of important health problems for consideration in planning the health education program of the public schools could be made in endless variety. The selection presented here is in an attempt to group the most important health problems into a small number of categories that would lend themselves well to incorporation into the school curriculum in various ways. In addition to the health problems, the following list of areas includes items pertaining to community health organization and general medical care. These are intended to cover the organization and use of social machinery to provide health facilities for meeting health problems on both an individual and a community basis. Attention is also given to the means of developing the appropriate attitude on the part of individuals toward medical care for the purpose of obtaining more adequate use of facilities provided.

The suggested basic areas for school health education are:

1. Cancer control
2. Communicable disease control
3. Correction of physical defects
4. Maternal and infant hygiene
5. Mental hygiene
6. Nutrition
7. Safety
8. Sex hygiene
9. Community health organization
10. General medical and dental care

11. General personal hygiene

12. Physical education

It is not intended to suggest that the schools should establish specific courses of instruction in each of these subject areas. The actual method of integrating the appropriate material into the curriculum is a function of education rather than of public health. It is probable that most of the subject matter could be covered by modifying existing curriculum content in biology, physics, home economics, civics, etc.

Cancer Control

Cancer control is listed as a separate area for school health education since the magnitude of the cancer problem is rapidly increasing due to the reasons previously specified. The control measures for cancer are not as adaptable to mass application as are those for such diseases as diphtheria and smallpox. The individual must obtain a sufficiently adequate knowledge of the development of cancer and the appropriate attitudes so that he will seek medical examinations when symptoms first appear and at regular intervals even though he is free of symptoms. The attainment of this objective is almost entirely an educational task, effort toward which should be started at as early an age as possible in the public schools and carefully continued in a steadily broadening scope on into adult life. The importance of cancer education in the

school curriculum has recently been emphasized by the Joint Committee on Health Problems of the National Education Association and the American Medical Association. The place of the complete physical examination performed carefully and at periodic intervals holds an important place in the cancer education program. The use of this health service in school as a part of cancer control is almost exclusively for the purpose of education. Unless this understanding is present, teachers and medical personnel will miss almost all of the benefit to be gained from this procedure in regard to cancer. As a matter of fact, a poorly performed examination or a hurried and impersonal attitude on the part of the examiner will do much to build up an unfavorable impression of the nature of the periodic examination and will develop harmful attitudes toward medical personnel and procedures in general. It can safely be said that full knowledge has not yet been obtained anywhere as to the full use of and the exact procedures for the routine school physical examination. Such an examination can be a precision instrument of education in many areas in addition to cancer control. It can mean the difference between success and failure in developing the motivating force to action, without which factual health knowledge is useless.

Communicable Disease Control

Communicable disease education incorporates instruction about environmental sanitation as well as specific infectious diseases. The theory and practice of immunization, the bacteriology of disease, the modes of spread, sanitary practices, and the place of medical care need to be covered in a well organized manner at an appropriate age level. Tuberculosis is an outstanding problem of the entire population, but particularly so in the colored race. The tuberculosis mortality rates for the age group 25-44 years for colored males and females was over five times the rates in the white race for the period 1944-46. Special attention should be given to

this situation in the colored schools. In fact, tuberculosis control could well be the single outstanding objective of health education in the colored schools until that disease is adequately reduced.

Correction of Physical Defect

Correction of physical defects is an important school activity; however, this part of the school health program should be seen in its proper perspective by both educators and public health personnel. The defect correction program should be seen as a part of the over-all school health program not as its major function. The correction of defects probably has its greatest value as an educational measure to promote health habits and contribute in other ways to the control of health problems of considerably more practical importance in later life. The school health program should not consider that its job can be completed merely by securing correction of all physical defects of the children enrolled.

There are few parts of the school health program that call for the collaboration of as many elements of the community health and welfare organization with the schools as does the correction of defects. The teacher and nurse must work as a team in finding defects, securing medical confirmation, and in following up each case, where necessary, into the home to advise and assist in obtaining medical care. Financial aid must often be supplied by voluntary or official agencies.

In connection with the correction of physical defects, the large and important field of special education for permanently handicapped children must be covered by school and health department alike. The efficient carrying out of a program of this type requires teamwork on the part of these two agencies in order that the handicapped individuals be located, given the necessary medical care, be permitted to receive the advantage of special educational techniques, and undergo rehabilitation, in so far as is possible.

Maternal and Infant Hygiene

Maternal and infant hygiene has

tremendous educational implications. The most important childbearing group in the population is that between twenty and twenty-nine years of age. This means that training completed in high school would precede only a few years the period when a distinct benefit to both mother and infant would result from the information received. Such simple facts as the effect of improper handling of food and milk upon its bacterial content and the subsequent relationship to enteritis, or the techniques of caring for premature infants could have a definite effect in lowering infant mortality rates. The shaping of the young child into the mold of citizenship is handled at an extremely important part of his life almost solely by his parents. The high schools have an unexcelled opportunity to impart certain basic essentials in child care to the future parents they graduate so that the young minds and bodies of the following generation will be in steadier hands. Indeed, the desired result in the high school graduate can be obtained only by laying the proper groundwork throughout the whole of his public school experience.

Mental Hygiene

In regard to mental hygiene, Ryan has described our present situation in the following words, "Scientific knowledge in the field of mental health is still decidedly limited — possibly the present level is on a par with the knowledge of physical health half a century ago; but most psychiatrists and mental hygienists believe that even the application of what little is known would, in all probability, work a veritable transformation in education and everyday living. In school, family, and community, gross violations of the most elementary principles are constantly occurring, and in ordinary school procedures countless opportunities for furthering wholesome personality with children go daily unobserved. There is general agreement on the part of scientific workers in mental hygiene that teachers can be of most service, not by trying to be specialists in this field in

any highly technical sense, but by having some insight into a few fundamental principles and endeavoring to apply these in their own everyday lives and in their living and working with children.

The fact that suicide and homicide appear in the ten leading causes of death at certain ages, that mental hospitals have long waiting lists, that our divorce rate is distressingly high, and that crime continues to take a terrific economic toll, is eloquent evidence of the urgency of the mental hygiene problem. It might be said that the greatest opportunity that exists today to improve the general level of health of the population is in the field of mental illness. Education and public health both have unlimited contributions to make and, in so doing, close coordination in planning and executing their educational programs will make an important difference in the rapidity of improvement.

One of the most important steps to improve mental hygiene in the schools is that of the appropriate screening of teachers. This possibility, almost completely out of the question with today's teacher shortage, will be one of the supplementary benefits to be derived from the attraction of a large number of individuals into the teaching profession by appropriate salaries.

In recent years little consideration has been given to factors other than scholastic training in admitting students to teacher training colleges. Certainly, the success of teachers in molding character and forming ideals in children is dependent, to a considerable extent, on their own character and personal and social adjustment, which cannot be measured by scholastic standards alone.

Nutrition

The school is in a unique position to influence the nutritional habits of children. The fact that eating habits are an important factor in the adequacy of the nutritional status of individuals and that habit formation occurs in youth places the responsibility for nu-

trition education directly on the schools. Development of a more functional approach to nutrition education has taken place only comparatively recently. Rose and Bosley have developed a series of teaching units for the various grade levels in which emphasis is placed on activities of interest to children, such as participation in the actual preparation of foods and simple animal experiments that vividly demonstrate the need for certain foods in the diet.

The expansion of the school lunch program has been the equivalent of placing a nutrition laboratory in each school. Determination of actual nutritional deficiencies within the local population by the public health agencies and cooperative planning with the foods can lead to an unusually specific corrective program not only from the standpoint of contributing needed foods to the diet, but also as a guide to permanent correction of the food choice pattern.

There are various practical difficulties that the schools must overcome before the full educational benefit can be secured through the school lunch program. Funds available to the schools will have to be increased sufficiently to permit a more liberal choice in the purchase of foods so that local dietary deficiencies can be more adequately met and a greater variety of foods can be served. Education of the parents simultaneously with the children is needed in order that progress made in school will be reinforced by appropriate action in the home. This is a difficult task which can be approached with some hope of success if school and health agencies plan carefully and pool their resources for adult education.

Safety

The outstanding problem in the area of safety at present deals with motor vehicles. At least one state school system has adequately recognized the seriousness of the situation and that driver training is properly a function of the public schools.

Delaware has instituted a state-wide driver training program as a required part of the curriculum of the

public schools. The course is administered by the Director of Health and physical Education of the State Department of Public Instruction under the joint sponsorship of the State Highway Department, the Delaware Safety Council, and the State Department of Public Instruction. The course consists of weekly classroom and road instruction. A final examination is given and the students successfully completing the course receive a certificate which, upon presentation to the State Motor Vehicle Department, may be exchanged for a driver's license. Dual control automobiles have been made available and a state handbook outlining the course of study has been prepared. It includes sections on physical and mental qualifications for drivers, motor vehicle construction and operation, consideration of pedestrians and bicyclists, and well as other features of accident control such as liability insurance and alcoholism.

The effectiveness of the course is demonstrated by the fact that during the period 1944 through 1946 there were 84 per cent fewer traffic violations for trained drivers than for those not having had the course.

It is interesting to note that in the state just mentioned the official health agencies did not appear to share in the responsibility for the program. State and local health departments throughout the country have been slow to initiate or participate in safety programs. This is probably a result of the comparatively small part that medical knowledge plays in the control of accidents; however, in those areas where other agencies have not developed sufficient interest to initiate the necessary programs, there is no reason why official public health agencies cannot assist the schools in securing funds and training personnel.

Training in other aspects of safety should receive detailed attention by the public schools. Accidental drowning takes a surprising toll of deaths, and in those schools where the necessary facilities are available instruction in water safety could profitably be made

a regular part of the school health activities. Study of the possibilities of expanding the safety program for the control of farm and home accidents, fire and firearm hazards, could profitably be carried out.

Sex Hygiene

Sex education is an essential in several aspects of health promotion. It is important in mental health, venereal disease control, and family life. The need for school participation in a program of sex hygiene is indisputable.

Changing moral standards and customs, increased freedom from adult restraint, changing social conditions with respect to employment of women, marriage, divorce, size of families — these are but a few indications of need for guidance. The young person wants to understand his body development, feelings, and desires, to adjust himself to his group and its customs. The need is evident. Society must attempt to meet it through the right type of education and guidance in the home and the community.

Adult education plays an important part not only in laying the groundwork for expanding the school program in regard to sex hygiene, but also is a concurrent part of that program in order that parents can adjust their own attitudes. Cooperation of community agencies is necessary to secure adequate understanding of and support for the issues involved.

Sex education can be incorporated into the various parts of the school curriculum naturally and unobtrusively. Unmixed classes are necessary for discussion of facts of a more personal nature, but even this can usually be done in connection with physical education activities. Social activities in the school can contribute a great deal in the adjustment of basic sex relationships.

The decisive factor in the development and execution of the sex hygiene program in schools is that of the training and personal qualifications of the teachers. The professional personnel of the health department staff serve as

useful resources of information for teachers and can contribute in other ways to the more technical parts of the program.

Community Health Organization

There is need for all individuals to have a knowledge of the various elements which are necessary to supply the community with adequate preventive and curative medical care. Such instruction in the public schools is a part of training for civic competence. This training must take into consideration the changes that have taken place in medicine as science has advanced and the relationship of these changes to other developments in the whole pattern of living.

Many new forms of medical care have become available. One type of practitioner can no longer adequately supply all of the different services. It has become necessary for a certain proportion of physicians to limit their training to certain highly technical areas of medical science and to learn the use of complex equipment, thereby becoming specialists. Many types of specialists now exist, several of whom may be required to provide the different types of care required for a single illness. This has resulted in the fact that medical care has become much more effective, but at the same time much more expensive.

The increasing industrialization of our society has brought about a concentration of population in large cities while we have changed from a nation of farmers to a nation of wage earners with the accompanying insecurity of income and instability of home life. The expensive apparatus and hospitals with which to give adequate medical service have been provided more extensively in the cities where the population is sufficiently dense to make such a provision financially feasible, and has resulted in inadequate care for rural areas. The insecurity of wage earners has brought about expanding social organization to provide minimum health and welfare needs. Government has played an increasingly important

role in this development, has recognized such benefits as the right of all parts of the population, and is making increasing efforts to reduce the economic burden and equalize the distribution of services between rural and urban areas.

The medical profession is becoming aware of these changes and sees the need for joint planning with citizens to solve the complicated problems that have arisen. The schools have an enormous and important task to prepare the future citizens sufficiently well to permit them to assume their share of the responsibility in social planning and operation of the organization developed. The schools, while probably having to limit the amount of factual detail in this field, will have to insure that each young citizen is fully aware of the principles of planning, working with his fellow citizens, and making proper use of the lessons of history and the experiences of others. It is necessary, however, that a certain amount of factual knowledge, such as the actual use of health insurance plans, the function and organization of hospitals, health departments, voluntary health agencies and their relationships with private medical services, be given to the student if he is to benefit fully by the services already available.

In providing training of this type, schools should make full use of the existing community services and the heads of the appropriate agencies should cooperate fully in preparing demonstrations and materials and in arranging for students to participate actively, to the fullest extent possible, in the various programs being carried on.

General Medical and Dental Care

The general level of health of the population could be raised considerably merely by a better understanding on the part of all individuals of the general indications for seeking medical and dental care and the danger signals of important diseases. The reasons for delay in seeking service frequently are based on faulty attitudes toward the physicians and hospitals. The establish-

ment of the correct attitudes must take place early in life. The experiences of children with school medical, dental, and nursing personnel are important in this respect. All too often such personnel are overly intent on the service aspects of their duties and through their actions unintentionally minimize the educational benefits to be gained.

More study is needed of the exact techniques of providing school health service on the part of professional personnel. The educational benefits produced need to be analyzed scientifically and the personal relationships carefully adjusted accordingly so as to make every contact between the child and the physician or nurse a purposeful step in creating desirable attitudes that in later life will permit prompt and favorable decisions when questions of seeking medical service arise. One of the most effective methods of improving relations between the public and the medical profession is for each individual physician to use a studied approach to children whether during school health services or private care. There is no reason that the public schools and health agencies cannot work toward obtaining the cooperation of all professional personnel in this regard.

Information as to the method of selecting private physicians and the proper evaluation of their services should receive attention in school. The relationship between general medical care and that of specialists should be discussed. The question of irregular practitioners needs factual presentation. Self-medication, which unnecessarily costs citizens great sums each year, is a problem about which the schools can do a great deal. First aid is also properly a part of this area of school health education.

General Personal Hygiene

Development of proper habits of dress, personal cleanliness, posture, rest, and recreation make up the content of this area. There is need for educators to become aware of the fact that while personal habits are important in the avoidance of certain health defects,

the nature of the major health hazards such as tuberculosis, cancer, mental illness, and motor vehicle accidents require much more specific knowledge on the part of every individual. General personal hygiene forms an excellent basis for such instruction but should not be considered adequate by itself.

Physical Education

Physical education has broader implications than are usually considered. Large muscle activities of properly selected types aid in bodily development and the acquisition of physical skills. Social efficiency, including courage, initiative and perseverance, knowledge of fair play, cooperation, and loyalty are all to be derived from broadly planned physical education. Cultural aspects include appreciations of physical laws, human nature, rhythm, and music. The narrow concept of physical education as a means only of developing athletic stars for the glory of the school should be discouraged in every way possible. The benefits to be derived from this area of education should be made available to all patrons of the public schools.

In all of the twelve areas discussed

here can be seen aspects that need emphasis for both youth and adults in varying proportions. Cancer control, maternal and infant hygiene, sex hygiene, and community health organization, while definitely having a place in the education of young people, probably require rather general treatment for the younger ages because of their large content of technical details. Information is needed in greater detail in adult life and after the problems themselves have been found by personal experience to be more intimately associated with the routine of living. In other areas such as the correction of physical defects, mental hygiene, and nutrition, the emphasis on youth and parents can be simultaneous, the progress in the child to be dependent upon the progress of the parent, and vice versa. In the remaining areas, the major emphasis is to be given in youth and only superficial follow-up is needed for adults. If such correlation as this is to be made an actuality, much more complete integration than at present between the schools and the adult health education activities of official and non-official agencies will have to be carried out.

PREVENTABLE AND UNPREVENTABLE DISEASES

By WILLIAM H. RICHARDSON
Raleigh, North Carolina

Practically every one knows that North Carolina has experienced the worst outbreak of infantile paralysis in the State's history. This makes the third major outbreak in recent years. The first occurred in 1935 and the second in 1944, during which the second largest number of cases developed. The 1935 outbreak was the smallest.

While it appears that the peak was passed in July, it would have been misleading to predict any rapid decline in the number of cases reported; certainly, no sudden stoppage. Early in the 1948 epidemic, the State Board of Health urged the people not to become hysterical. Hysteria does no good what-

soever; on the contrary, it does harm—definitely. However, Public Health authorities have never advised wishful thinking. That would not help the situation, either. What we should do in a crisis is to look a situation squarely in the face, brace against it, and use every reasonable precaution, of which avoidance of possible contacts among children would appear to be the most reasonable. We know that the person to person route is the one taken by most communicable diseases. Hence, the isolation of persons suffering with such diseases is always advisable. That is why quarantine has a legal status.

Many of the communicable diseases

now are controllable or preventable. Unfortunately, infantile paralysis is not—that is, no control and preventive measures have, as yet, been discovered. Undoubtedly, the disease eventually will be brought under control and some means of prevention will be discovered; but until then, all we can do is to adopt procedures that *may* prevent the spread of infantile paralysis. In other words, we must feel our way along, step by step.

During the discussions centering around the 1948 polio outbreak in North Carolina, reference has been made to diseases which are now controllable and preventable, but which have not always been in this class. Included in this group is typhoid fever, which has been made the subject of an exhaustive study by J. W. Kellogg of the State Laboratory of Hygiene. His findings are of particular interest at this time, when comparing the incidence and fatality rate of polio with typhoid fever—a disease which has not always been preventable.

The radio and the press kept the public advised, daily, as to the number of polio cases reported to the State Board of Health. Without repeating figures with which you are, more or less, familiar, let us briefly consider the ravages of typhoid fever in this state in the past. No attempt will be made here to draw comparisons between the crippling results of typhoid fever and infantile paralysis.

Now, as to the history of typhoid fever in North Carolina, our present system of keeping vital statistics records began around 1914. Undoubtedly, typhoid fever was more prevalent in North Carolina before accurate records were kept. But, as late as 1914, there were 8,390 typhoid fever cases reported to the State Board of Health. Of this number, 839, or 10%, died. The death rate that year was 35.8 for every 100,000 people living in the state. Last year, the typhoid fever death rate in North Carolina was only 0.2 persons per 100,000 inhabitants. This represented only six typhoid fever deaths in 1947, as compared with 839 in 1914.

Ten years after 1914—that is, in 1924—there were 1,318 cases of typhoid fever reported. Of this number, 270 patients succumbed. By 1934, the number of cases dropped to 464, with only 91 deaths.

The decline in typhoid cases, and deaths resulting therefrom, has been coincidental with the advance of preventive medicine. Even after means for immunizing against the disease had been developed, a large segment of the population was skeptical, while thousands of others were indifferent. However, through the processes of education, the public has been brought to a realization of two facts: First, that immunization is *not* injurious; and, second, that it is effective.

But the decline of typhoid fever has been due to another cause—improved sanitation, without which the battle would have been only half won. Typhoid fever, like some others, is a filth-borne disease. Here we find a verification of the proverb that “cleanliness is next to godliness.”

Discussing the results of North Carolina's war against typhoid fever, Mr. J. W. Kellogg, to whom reference was made earlier in this broadcast, has written the following comments:

“Before the State Laboratory of Hygiene began to supply free typhoid vaccine, the vaccine sold for \$1.50 for each person. Typhoid fever was prevalent in all parts of the State. In 1910, the United States Army began to protect the men in the armed forces by injections of vaccine, and promising results were indicated.

“The medical profession, in the interest of preventive medicine, began to see the possibilities of general vaccination against typhoid. In 1913, Dr. George M. Cooper, then a practicing physician in Sampson County—now Assistant State Health Officer—made a plea for free distribution of typhobacterin. During the latter part of that year, the Laboratory of Hygiene began the manufacture of its first biologic product. During 1914, we distributed a sufficient amount to immunize more than 40,000 persons, although there was

no general campaign and no general program of clinics. The response of the health officers, as well as the general practitioners of medicine, to the demands of the people was generous and gratifying.

"In 1915, the State Board of Health inaugurated a definite program which would make it possible for any person in North Carolina to protect himself against this new preventable disease. Campaigns were conducted by the Board of Health, under the direction of the Division of Epidemiology. Publicity was given, by lectures at schools, manufacturing plants, etc.; posters, press articles, and newspaper advertisements, *as well as* public lectures, were used to bring to the attention of the public the dangers of typhoid, and to awaken interest in the campaign."

From this beginning, the typhoid immunization movement has reached its present proportions. But let us not forget that, all through the years, emphasis has been placed upon sanitation as an aid in the fight against a disease that killed 839 North Carolinians in 1914, as compared with a half dozen in 1947.

Typhoid fever is just one of many preventable diseases that have been brought to a minimum through preventive measures that have been discovered, approved by doctors of medicine, and public health officials, and put into general use. But if, at any time, there should be a cessation of our immunization activities, all these diseases would stage a come-back. An infectious disease can never be trusted; it must be held in subjection, through a continuance of preventive treatment.

Some day, no doubt, infantile paralysis will become just as preventable and controllable as smallpox, typhoid fever and diphtheria; but, until that day dawns, we must be patient and hope for the time of liberation from its fearful clutches. Of one thing we can all rest assured: That when means are discovered for preventing or controlling polio, the public will be far more ready to accept them than it was to accept vaccination against smallpox, typhoid fever, or diphtheria. The principle of preventive medicine now has become so well established that it is accepted by all, even those who formerly were skeptical.

BOOKKEEPING OF LIFE AND DEATH

BY WILLIAM H. RICHARDSON

Raleigh, North Carolina

With figures for the first five months already compiled, the vital statistics trend in North Carolina for 1948 already has taken shape.

Vital statistics constitute the book-keeping of life and death. Following birth, the name of every child in North Carolina, together with the date of its birth, the name of its parents, and other essential information, must be filed with the State Board of Health. This is as it should be, for it establishes certain basic information without which many rights of the child in question might conceivably be jeopardized or even denied in future years. The very fact of citizenship itself rests

upon one's nativity. There are many legal documents which cannot be finally authenticated without information concerning one's date of birth. The same is true of insurance policies and various claims in which one's date of birth plays an important part.

The State Board of Health's division of vital statistics also records each death that occurs in the state, together with the cause of that death and other essential information. There are times when a death certificate is absolutely essential in making a claim. More and more, in recent years, have vital statistics been brought into use.

Before the adoption of our present

vital statistics system, one of the main sources of information establishing dates of birth was the church—that is, branches of the church which require registration at christening time. However, the practice of some denominations do not emphasize the baptism of infants. Hence, these denominations have no authentic method of recording births.

Even before our vital statistics system was established, a majority of people, perhaps, regardless of church affiliation, inscribed the names of their babies in the family Bible. Even now, the bureau of vital statistics accepts baptismal and Bible records as a means of establishing information necessary for the issuance of delayed birth certificates, but in many instances it is found that family Bibles have disappeared and other means, less authentic, have to be resorted to. In rare cases, it is impossible to establish the date of an adult's birth.

And so, you see, when the state instituted procedures whereby it became the official bookkeeper of life and death, it usurped no prerogatives of the church, but simply established a factual ledger for the recording of births and deaths. Since 1915-'16, North Carolina has been in what is known as the registration area for vital statistics, which now covers entire United States. At first, of course, the task was more difficult than at present; but despite the early imperfection of the system, the record of life and death in North Carolina, since 1913, is fairly complete.

The progress of vital statistics records has been coincidental with the progress we have made in the control and prevention of many diseases which formerly claimed the lives of thousands of people throughout the nation each year. Take Cholera for example, or Typhoid Fever—about all we can do is to estimate the number of lives claimed by these two diseases, alone, prior to the establishment of an adequate reporting system. We know, for example, that during the War Between the States, smallpox killed thousands

of soldiers on both sides—just how many we will never know. In contrast with this, a smallpox death now rarely occurs in North Carolina. Sometimes, for several years, there is not a single such death reported. As to typhoid fever, the death rate has been reduced to a minimum in North Carolina. Throughout the entire year of 1947, there were only six deaths from typhoid fever in this state, in contrast with hundreds which formerly occurred. Deaths resulting from children's diseases have been decreased tremendously. This is especially true of diphtheria, which is now both curable and preventable.

Unfortunately, however—even though we are able to save lives of children, and even though our period of longevity has been increased to an astonishing degree in the past few years—more people are dying as the result of diseases associated with middle and late life than ever before. The death toll from these diseases is shocking. During the first five months of this year, that is from the beginning of January through May, 7,017—or considerably more than one-half of the 13,515 who died from all causes, were the victims of just four of such diseases. Heart disease claimed 3,664 lives during the period just mentioned; 1,547 died of Apoplexy; 1,141 died of Nephritis—or Bright's disease—and 665 were victims of Cancer. No means, as yet, have been discovered for the prevention of any of these diseases. The best we can do is to resort to early diagnosis and treatment. Hence, the importance of keeping in touch with your family doctor and of reporting to him at stated intervals for a thorough check-up. He is in a position to detect the first danger signals—you are not! Above all, never resort to self-medication, and never take into your system some so-called remedy recommended to you by a friend with good intentions. Only a medical doctor is qualified to diagnose and to treat any disease.

Let us now have a look at the number of deaths from some other causes during the period under consideration.

While 295 deaths resulting from automobile accidents were reported to the State Board of Health, during the first five months of this year, compared with 356 for the corresponding period of 1947, there were 665 attributed to accidents other than those in connection with motor vehicles. Many of these latter accidents occurred in the homes of our people and were practically one hundred percent avoidable. During the period under discussion, there were 163 homicides in the state. All these, of course, were avoidable. While many of the slayers may be serving prison terms for their crime, this

does not restore the victims to life.

It is also interesting to note that 123 people in North Carolina took their own lives from January through May of this year. In each case a visit to a doctor, or a minister of the gospel, might have prevented self-destruction which undoubtedly, in most cases, at least, is the result of some mental, emotional or spiritual upset. There is no doubt but that a minister of religion can be of great assistance to many of our people in the throes of some mental maladjustment. After all that is said and done, spiritual health is necessary to the well-rounded life.

NOTES AND COMMENT

BY THE ACTING EDITOR

Medical Schools Need

Increased Financial Support

CHICAGO—The need for additional financial support is one of the most important problems confronting medical schools, the American Medical Association announced today.

This need is pointed out in the 48th annual report on medical education in the United States and Canada by the Council on Medical Education and Hospitals of the American Medical Association. The report is published in the September 4 issue of *The Journal of the American Medical Association*.

Donald G. Anderson, M.D., Chicago, secretary of the council, who prepared the report with the assistance of Miss Anne Tipner, states that for the school years 1948-1949 the budgets of the medical schools and basic medical science schools in the United States total \$51,000,000, an increase of \$8,000,000 over the total for the years 1947-1948.

These schools owe much of their success in meeting the problems of inflation to the loyalty of their staffs, whose salaries in many cases have not kept pace with the rising cost of living, the report states. However, the problems presented by inflation and the recognition that advances in medical educa-

tion could be made if more funds were available are causing those who are responsible for the conduct of medical education concern as to whether satisfactory progress can be maintained in the future.

Medical schools in the United States are at present admitting the maximum number of students that their facilities will permit without lowering educational standards, Dr. Anderson states in the report. The total enrollment, excluding students taking a required intern year, in the 70 medical and seven basic medical science schools in the United States during the academic year 1947-1948 was 22,739 students.

Although this figure is 1,161 less than the total enrollment for 1946-1947 if the extra classes that were in session during that period as carryovers from the wartime accelerated program are included, a number of schools are accepting more students than can satisfactorily be accommodated, he points out. The enrollment of 22,739 students is 1,212 greater than the average enrollment during the five year period, 1937-1941, immediately preceding World War II.

Had the junior class of 1947-48 been at full strength when admitted, the enrollment in the medical schools

would now exceed 23,000, the report states. This group entered medical school in the academic year 1945-1946 as the smallest freshman class in the past seven years. At the time this class was selected, there was no provision for the deferment of premedical students by Selective Service.

In editorials which appear in the September 4 issue, *The Journal* comments:

"The need for additional financial support to stabilize their present programs and to undertake essential new developments continues to be one of the most important problems facing the medical schools. While medical schools have been forced to increase tuition fees in recent years, student fees will still provide only 25 per cent of the cost of operating the medical schools in 1948-1949. The high quality of medical education in the United States has been made possible only by the support which medical schools have received through endowments, gifts, university funds, and state and municipal tax sources.

"Sixty-six of the 70 approved medical schools in the United States have stated that they cannot admit more students with their present facilities for instruction in the preclinical departments. Thirty-seven of these schools have indicated that to admit more students an expansion of their clinical facilities would also be necessary, as have the four schools that did not report a need for additional preclinical facilities.

"Expansion requires much more than providing additional classroom space. Additions to laboratories and hospitals and the expansion of libraries, administrative offices, and other central departments would also be necessary. It should be clear from the council's report that the problem of increasing enrollments is not simple and that no school is likely to undertake to expand its facilities unless the need is unmistakably clear and sufficient financial support to meet the expense is assured."

The National Headquarters of the Selective Service System has conferred with representatives of the medical

schools concerning policies whereby a certain number of students in premedical courses will be given consideration for deferment, the report states.

These policies are expected to be published shortly in a directive for the Selective Service System, although they may not be forthcoming until the local boards are completely established.

In another editorial which appears in the September 4 issue, *The Journal* states:

"The Selective Service Act of 1948 renders liable for service in the armed forces men between 19 and 25 years of age, the age group from which the great majority of premedical and medical students are drawn. There does not seem to be any question that the deferment of medical students and physicians in their first year of internship will be authorized. Selective Service officials have indicated that they recognize the importance of allowing a sufficient number of students to continue their premedical education so that the number of students and graduates will not be reduced in the years ahead.

"It seems probable that satisfactory provisions will be made for deferring an adequate number of premedical students. The importance of such a provision cannot be overestimated. The present Selective Service Act affects students who would in the normal course of events be entering medical school as late as the fall of 1953. Its effect on the production of physicians may thus be felt as far in the future as 1957. While veterans and others not liable for military service under the Selective Service Act now comprise a high proportion of the students in medical schools, during the next several years the schools will have to draw more and more of their students from the group liable for military service.

"During the latter years of World War II no provision was made for deferring premedical students. A decrease in enrollments occurred that was kept from progressing to serious proportions only by the unexpectedly early termination of the war. In the

interest of the nation's health and safety, the possibility of such an eventuality cannot be allowed to occur again.

"Of great importance to medical education also is the assurance of a continuing supply of trained teachers and investigators in the basic medical sciences. One of the major obstacles at present to expanding the facilities for medical education in this country is the lack of trained teachers which resulted from the almost complete cessation of graduate study during the war. At least another five years will be required to make up the deficiency of teachers. It is important, therefore, that the Selective Service System also make provisions for the deferment of an adequate number of graduate students in the basic medical sciences."

During the period from July 1, 1947 to June 30, 1948 there were 5,543 graduates in the United States and three schools graduated two classes during this period. The record 6,389 graduates reported for 1946-47 included the students graduated during a 13 month period in which 10 schools graduated two classes. The medical schools estimate that they will graduate 5,157 students during the year July 1, 1948 to June 30, 1949.

Veterans comprised more than 73 per cent of the freshman class as compared to nearly 63 per cent in 1946-1947. Preliminary estimates of the composition of the 1948 freshman class indicate that about 68 per cent of the students will be veterans. The Journal states in an editorial which appears in the September 4 issue. The total enrollment of veterans in the medical schools and schools of the basic medical sciences in the United States increased from 55.6 per cent in 1946-1947 to 60.9 in 1947-1948.

Women comprised 9.5 per cent of all medical students in the United States during 1947-1948. This is the highest proportion of women students ever recorded. However, the percentage of women in the freshmen class declined from 11.1 per cent in the preceding year to 7.9 per cent.

The total recorded attendance at re-

fresher and continuation courses for physicians was 82,803. This figure, which does not include the attendance at 114 courses for which no attendance records were submitted, represents more than 40 per cent of the total number of living physicians in the United States.

There were 447 students in the required intern year in the United States. The medical schools and schools of the basic medical sciences in the United States estimate that they will enroll 6,407 freshman students during the academic year 1948-1949.

Secretary Of Council On Emergency Medical Service

CHICAGO—Dr. Harold R. Hennessy has been appointed to the newly-created office of Secretary of the Council on National Emergency Medical Service of the American Medical Association. Dr. James C. Sargent, Milwaukee, Wis., is chairman of the council, which was formed in 1947 to coordinate medical efforts associated with a national emergency.

Dr. Hennessy has been associated with the A. M. A. Council on Industrial Health since February 1946.

Dr. Hennessy, who received his M.D. degree from the University of Minnesota, held various assignments during the war years, his last being that of head of the Public Health Section in the Office of the Surgeon, Fifteenth U. S. Army. He received several military decorations, including the Order of Orange-Nassau Degree of Officer With Swords from the Netherlands government.

Pasteurization Of Milk Prevents Undulant Fever

CHICAGO—Pasteurization of milk and dairy products is the only practical method of preventing undulant fever, which affects 30,000 to 40,000 persons annually in the United States, points out Charles L. Steinberg, M.D., of Rochester, N. Y.

Writing in current (September 4) issue of *The Journal of the American Medical Association*, Dr. Steinberg reports:

"Pasteurization of milk and dairy products for human subjects is the only practical method available in view of the complex picture regarding the widespread existence of this infection in cattle.

"It is economic suicide and a practical impossibility to eradicate Bang's disease by slaughter of infected cattle. The accepted method of control of this infection in animals is by vaccination. Better dissemination of present day knowledge and more research are needed."

Undulant fever is transmitted to human beings from infected livestock. In cattle the infection is known as "Bang's disease."

Undulant fever can cause arthritis of the sacro-iliac joints of the lower back, Dr. Steinberg says, explaining that symptoms of the disease are so varied that patients often appear to be suffering from nervous exhaustion or a psychoneurosis.

"One may be able to list any symptom from headache to constipation and be able to fit the picture in with that of chronic undulant fever," he comments. "The typical fever is often likened to the initial phase of typhoid. Aches and pains in the joints are often noticed."

Medical history shows various forms of undulant fever—one which scarcely makes patients ill and another which causes extreme illness for weeks. Most patients are moderately sick over a long period of time; two years of treatment may be required. Nearly all persons who have undulant fever recover.

Recent studies suggest that administration of streptomycin and sulfadiazine is the "treatment of choice" for undulant fever, Dr. Steinberg says. The suggestion that streptomycin be used over a long period of time to treat undulant fever should be taken with caution, however, according to Dr. Steinberg, who adds that streptomycin is a much more toxic drug than is penicillin.

Second Annual Interim Session To Emphasize General Practice

CHICAGO—Attention of the medical profession will be focused on procedures and problems of the family doctor, or general practitioner, at the second annual Interim Session of the American Medical Association in St. Louis, November 30 to December 3, 1948.

On the eve of the Interim Session, Saturday, November 27, the first national Medical Public Relations Conference will be held under sponsorship of the A.M.A. at the Statler Hotel in St. Louis.

Lecture meetings and a wide variety of clinical conferences on conditions most often seen in daily practice will be conducted at the Interim Session by medical leaders from all sections of the nation.

Subjects to be discussed include diabetes, heart disease, cancer, poliomyelitis, obstetrics, pediatrics, dermatology, genito-urinary conditions, hypertension, anesthesia, tuberculosis, jaundice, laboratory diagnosis, x-ray diagnosis, and physical medicine as applied to the treatment of arthritis.

Diagnosis and treatment will be stressed in the clinical conferences, which will be correlated with the lecture meetings.

Evening programs will feature distinguished speakers and the award of the general practitioner medal.

A scientific exhibit with nearly 100 displays will show clinical and pathological material, and approximately 115 leading manufacturers will display technical exhibits of new medical products, equipment, and publications. All exhibits will be open from Tuesday at 8:30 a.m. to Friday noon, November 30 to December 3.

Papers will be read at the General Scientific Meetings in the St. Louis Opera House from 9 to 10 a.m. and from 2 to 3 p.m. each day.

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

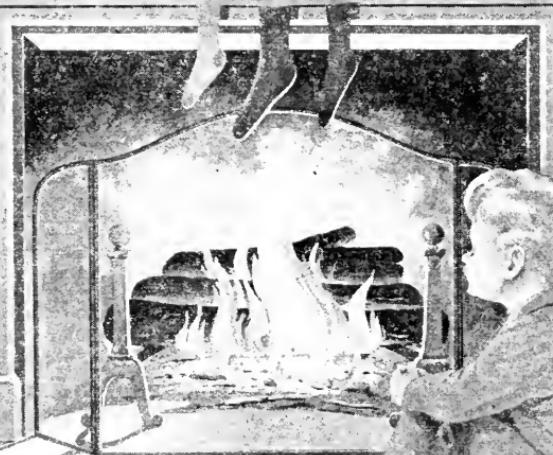
Vol. 63

NOVEMBER, 1948

No. 11



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FREE HEALTH LITERATURE

The State Board of Health publishes monthly THE HEALTH BULLETIN, which will be sent free to any citizen requesting it. The Board also has available for distribution without charge special literature on the following subjects. Ask for any in which you may be interested.

Adenoids and Tonsils	German Measles	Sanitary Privies
Appendicitis	Health Education	Scabies
Cancer	Hookworm Disease	Scarlet Fever
Constipation	Infantile Paralysis	Teeth
Chickenpox	Influenza	Tuberculosis
Diabetes	Malaria	Typhoid Fever
Diphtheria	Measles	Venereal Diseases
Don't Spit Placards	Padiculosis	Vitamins
Endemic Typhus	Pellagra	Typhoid Placards
Flies	Residential Sewage	Water Supplies
Fly Placards	Disposal Plants	Whooping Cough

SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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J. W. R. NORTON, M.D., M.P.H., State Health Officer

JOHN H. HAMILTON, M.D., Acting Editor

KEEPING FAITH

BY FRANK W. WEBSTER, EXECUTIVE SECRETARY
North Carolina Tuberculosis Association

THE 1948 Christmas Seals, which are being distributed by the North Carolina Tuberculosis Association and its 122 affiliates, show a young boy expectantly awaiting Santa Claus before a fireplace from which three empty stockings hang. It is a typical night-before-Christmas scene in America. The boy knows that Santa Claus will come. He always has. There is no reason to doubt this year. Yes, on Christmas morning the stockings will be full. The boy's faith will be rewarded. Will the faith of the tuberculosis associations and committees in North Carolina likewise be rewarded when Christmas comes? There is no reason to doubt here that it will. It always has.

Working in cooperation with the health department, the medical profession and other groups, the association has for the past forty-three years sponsored a well planned program for the control of tuberculosis in the state. This program has helped bring down the tuberculosis death rate 80% since the association was organized, yet tuberculosis is still a grave health problem, taking the lives of more young adults than any other disease.

In 1900 the death rate in the United States was 194 per 100,000 persons. In 1947 it had dropped to 33 per 100,000 but still in 1947 50,000 citizens died of tuberculosis in this country, 140 a day—one almost every ten minutes. It is

estimated that at least half a million Americans have TB in an active state. This statement means that on the average one person in every 200 to 250 adults has "active TB"—that is, TB which is dangerous to himself and other people. Of the half million persons with "active TB" only half of these cases are known and the other 250,000 are unknown ones. TB kills more persons between 15 and 44 than any other disease. In addition, tuberculosis costs America millions of dollars annually in care for the sick in hospitals, and at home and in lost hours of work.

Ninety-six per cent of TB patients cannot afford to pay for their hospital expenses. The burden falls on the tax payer. For one year, 1943, it is estimated that TB cost the United States about \$174,000,000 of public and private funds. To these tremendous costs must be added the loss of income to the family of a wage earner who has tuberculosis. In 1943 the potential wages which would have been earned by people sick with TB that year was more than \$94,000,000. These people and the ones who died from tuberculosis that year could have produced goods and given service valued at more than \$348,000,000.

1,174 persons died in North Carolina from tuberculosis during 1947. The rate per 100,000 was 28.4. 2,099 persons were reported in North Carolina as having

tuberculosis last year. During the past five years over 6,000 North Carolinians died from tuberculosis.

Health Education is a vital part of Job Number I. It takes a tremendous amount of repetition to educate the public to the point of action. The bulk of all money raised in the Christmas Seal Sale is spent on informing the public over and over in every way through discussions, newspapers, radios, printed materials and visual aids, that tuberculosis is a catching disease, but can be prevented and controlled and even eradicated in time.

As Christmas approaches each of us would like to feel that we have done something to add to another's happiness at this season. The joy that Christmas normally brings is not complete unless we have that inner satisfaction that comes with knowing we have made a contribution to the welfare of others, that we have overlooked no little thing that might make this Christmas a better one.

Each person may know of some special thing he can do to make Christmas happier for another. For one person,

it may be buying a doll for a neglected child. For another, it may be sending a basket of fruit to an invalid. But, regardless of what we may do for individuals, there is one thing all of us can do for everyone in the community, including ourselves.

We can buy and use Christmas Seals.

Christmas Seals have become an American tradition. They have become a tradition because they are a symbol of an important piece of work that has been carried on in this country for forty-odd years. The North Carolina Tuberculosis Association and its local affiliates depend entirely upon the annual sale of Christmas Seals to finance its programs. Ninety-five cents out of every dollar given in North Carolina remains in the state for the program of the state and local associations. Five cents goes to the National Association for its work. Those of us who buy and use Christmas Seals will have the satisfaction of knowing, when Christmas Day dawns, that we have made a contribution to the welfare of our nation, state and own community in which we live.

A FIRST NEED IN NORTH CAROLINA

BY HENRY STUART WILLIS, M.D., SUPERINTENDENT
State Sanatoria, McCain, North Carolina

TWO sisters, one a school teacher and one a stenographer, lived together in a small town in North Carolina. They had one room, a bath and hot plate accommodations with which they managed to keep house quite satisfactorily. Then one of them fell ill with tuberculosis. Despite repeated efforts to gain early admission into the State Sanatorium, no opening was available for more than four months, during which time the one sister cared for the other as best she could, while continuing with her job. They thus had to live together in the one room. Finally admission day arrived but the girl had far advanced tuberculosis from which she died about three months after entering.

The sad sequel to the story is this: that the erstwhile well sister is now a patient in the Sanatorium, following her close contact with tuberculosis. The members of this family can properly say "if only there were enough beds for tuberculosis!" And the Sanatoria folk can echo this plaint, for there are not enough beds.

The waiting lists of the three State Sanatoria have more than 250 names on them. In one of the institutions the wait is nine months long for certain classes of patients (in this case white women). In another, one-fourth of the people on the list (colored women) die while waiting and hoping for admission. Just as important, the institutions are refusing to admit the hopeless case be-

cause that would claim a bed which someone who could recover might occupy. And even more to the point and to make more room for curable cases, they are sending numerous hopeless cases back to their homes. Such a procedure encourages the spread of the disease and is to be condemned. But it is a matter of choice whether to house cases who can be helped or those who cannot. In each case someone is left a home with a disease that is a serious threat to the household and community.

And tuberculosis is not measured solely by the number of deaths it claims, for a good number who contact the disease may recover even at home, although spreading the germs among others meantime. It is a matter not only of death but also of prolonged illness, disruption of homes, loss of earning power, and poverty and deprivation for dependents.

The death rate is declining moderately in North Carolina, yet 1182 North Carolinians died from tuberculosis in 1946. It is estimated that at any given time the number of cases is ten times the number of deaths, which means that there are probably more than 10,000 cases in the State today. Some of these—indeed many of them—are arrested, but no case is ever cured. All of them are subject to reactivation.

The expanding of mass case finding technique such as that now actively under way by Dr. William A. Smith and his staff in the State Department

of Health, will uncover cases who will need treatment. Will we put them on the waiting list? That is all that can be done at present because of the shortage of beds.

How many beds does the State now have? How many new ones are needed? A recent survey made by the North Carolina Association shows that North Carolina has 2001 beds for tuberculosis, exclusive of those in veteran's hospitals. Actual beds in the institutions for the insane bring this number to 2288. There are also 126 beds in private hospitals in this State for tuberculosis patients. This brings the total number of beds for the tuberculous in North Carolina, including all types of beds, up to the total of 2414. It is observed that the state which provides 2½ beds per death per year experiences rapid decline in the death rate. Such states as Massachusetts, New York, Michigan, Illinois and California have reached that level. Can North Carolina do it? According to this formula this State needs 667 more beds—even contemplating that every bed is occupied in all of the county institutions, large and small, and in all three of the State institutions. There is need for a new unit of 400 beds in the Sanatorium system, and an added unit at the Western North Carolina Sanatorium of 100 to 150 beds for Negroes. The construction of these new units have been proposed to the Budget Advisory Commission and the request will go to the next General Assembly in January. The need is great.

THE STATE TUBERCULOSIS CONTROL DIVISION

By WILLIAM A. SMITH, M.D., DIRECTOR

I. History, Personnel and Equipment

The Division of Tuberculosis Control is now in its fourth year of operation. The Division was organized January 1, 1945, and Dr. T. F. Vestal was the first Director. The sum of \$18,000 was made available by the Federal Government and with this money two mobile units were ordered. One of these was delivered ten months later and the second unit

in the early part of 1946. During the first year and a half three units were procured but due to a war-time lack of personnel and other vexing matters beyond the control of the Division it was found necessary to combine this Division with the Division of Industrial Hygiene. However, by June 30, 1946, 60,000 films were made in 14 cities and counties.

By the fall of the same year additional equipment had been procured and considerable help in both equipment and personnel was given by the U. S. Public Health Service. The 1946-1947 budget was \$268,000 of which \$245,120 was appropriated by the Federal Government, and \$22,800 from State funds. The 1947-1948 budget from Federal funds is about \$45,000 less; the State funds being the same.

At this time we have two physicians; there are four physicians authorized. Other personnel consists of sixteen technicians and clerks in the field and three clerks and one technician in the office of the Director. Personnel in other divisions which are engaged in tuberculosis control are four consultant nurses, one of whom has had special training in tuberculosis, a technician in the laboratory of the State Laboratory of Hygiene, personnel in the Division of Vital Statistics and two full-time Health Educators.

Equipment consists of:

- (a) Six mobile X-ray units equipped
- (b) One empty trailer
- (c) One X-ray unit, and one X-ray unit and trailer on order
- (d) Two International Generators and one additional Generator on order
- (e) One G.E. 200 MA unit installed at Duke Hospital
- (f) One Chevrolet Suburban Carryall
- (g) Eight International tractor trucks

In the near future we will have a total of 7 mobile X-ray units operating with the possibility of an eighth. Our plan is to use 4 to 5 during mass X-rays; one for the use at the State Sanatorium in follow-up work; one for surveys in Industrial plants and one for survey of State institutions, schools, etc.

II. General Policies and Operation

In order to conduct a successful tuberculosis control program the following factors must be borne in mind:

- (a) Case finding
- (b) Clinical services
- (c) Field nursing service
- (d) Institutional care

- (e) Health instruction
- (f) Rehabilitation
- (g) Welfare service

In our State there are seven agencies on a State level which are concerned with Tuberculosis Control; also the State Tuberculosis Association, and in addition the County Health Unit which is responsible for final action in the location and hospitalization of the tuberculosis patient.

State agencies concerned with Tuberculosis Control and not controlled by the State Health Officer are:

- (a) The Department of Public Instruction (Vocational Rehabilitation).
- (b) State Board of Public Welfare and
- (c) The State Sanatoria, and those agencies in the State Board of Health are:
- (a) The Division of Local Health Administration.
- (b) The Division of Vital Statistics and Epidemiology.
- (c) The State Laboratory of Hygiene, and
- (d) The Division of Tuberculosis Control.

Each of these agencies has its own distinct mission. It has been decided that the Tuberculosis Control Division, in addition to its other responsibilities will have as one of its principle duties, the problem of case finding, and that the State Sanatoria will be responsible for the follow-up of those cases found during mass survey. The follow-up, therefore, has been delegated to that State organization which has to do with the care and hospitalization of the tuberculous person and it is believed that the arrangement will be more satisfactory than the arrangement formerly followed.

III. Planning For A Survey

The operation of a survey primarily concerns case finding. When cases are located, the follow-up by the State Sanatorium begins, and with the final result, namely the person with tuberculosis, the action of other agencies is brought into play. Such action consists

of hospitalization by the State Sanatorium, rehabilitation, laboratory work, the proper records by Vital Statistics, nursing care and welfare services.

Planning for a mass chest X-ray survey involves certain preliminary action. Such action consists in a visit to the county by a medical representative of the Division who interviews a member of the Board of County Commissioners, preferably the Chairman, the County Health Officer, the Secretary or other member of the Local Tuberculosis Association, and any other person interested in tuberculosis control. This visit is followed by a Health Educator from the State Board of Health and if possible the Medical Representative and Health Educator visit the county at the same time. Following this visit the Chief Technician assigned to the X-ray units interviews the County Health Officer with a view to making a survey of the county concerning electrical connections. At this time publicity is given to the local newspapers and additional publicity given just prior to the date the X-ray units enter the county for the purpose of the mass X-ray survey. It has also been the custom for the Health Educator to address certain civic organizations and by the time units are ready for action, considerable publicity has been given the survey.

IV. General Policies of a Survey

The general policy governing a survey requires some explanation. In so far as surveys in general are concerned, it is the general policy of the Board of Health to survey those counties who have a reasonably adequate nursing staff and local health administration and to begin such surveys according to the date the county or district requested such a survey. Conditions governing the consideration of applications for surveys are:

(a) Only requests from the local Health Officer will be considered and it must be clearly indicated that the Health Department is the responsible local sponsor. It is advisable to have the cooperation of other community groups and agencies but it must be

clearly understood both by the health department and by the community that the survey is under the auspices of the local health department with the cooperation of the Board of Health and possibly the Tuberculosis Association.

(b) Local funds needed will be approximately \$10.00 per hundred persons to be X-rayed in the survey.

(c) The staff and facilities of the local department must be sufficiently adequate to provide for successful operation of the survey in so far as the local responsibilities for promotion, etc., are concerned, and to assure adequate follow-up so that all cases uncovered by the surveys may be satisfactorily classified and given proper supervision.

(d) The local health department should also have available on a permanent basis the equipment for doing full size X-rays of the chest.

(e) There should be assurance of co-operation of city and county governing bodies, the Board of Health, the medical profession and various civic and community groups.

(f) The State Sanatoria which is concerned with the follow-up cases, will report all findings of pathology, tuberculosis and non-tuberculosis, to the local health department and it will be the sole responsibility of the local health department to report such findings to:

- (1) The patient and/or his family
- (2) The patient's physician

In addition to these general policies there is certain personnel and equipment required from the local health department and the list of such equipment and personnel will be furnished on request.

V. Operation of a Survey

Surveys in our State were accelerated during the fall of 1946 due to the help in personnel and equipment given by the U.S. Public Health Service. Three major surveys were made until the first part of 1947, but in February of that year all personnel except one doctor was recalled.

Up to that time and during the period of July 1946 to July 1947 three major surveys were made in an area, the population of which was over 200,000 persons. Up to June 30, 1948, this Division had taken over 585,000 pictures and has diagnosed 706 definite cases and 3,970 suspicious cases of tuberculosis also 2,263 cases of other pathology.

VI. Future Planning

The operation of this Division has been discussed with many local health officers, and for the past two years representatives from the U. S. Public Health Service have rendered complete reports on the manner in which the Division has operated. The Director has visited Tuberculosis Control Divisions in two neighboring states, and based on suggestions offered by Local Health Officers as well as reports from the U. S. Public Health Service and on a knowledge of similar organizations in other states, a long range future plan has been formulated and is as follows:

- (a) The follow-up clinics are to be conducted by the State Sanatoria instead of the Division of Tuberculosis Control.
- (b) A Central Case Register to be established.

(c) A qualified consultant nurse has been employed and a second such consultant will be employed when funds justify such employment.

(d) The routine examination for tuberculosis in all hospital in-patients and out-patients is recommended by the State Board of Health and necessary equipment for such examinations in selected locations will be furnished when funds are available.

(e) Tuberculosis surveys of all mental institutions and other State institutions by a mobile unit from the Division of Tuberculosis Control.

(f) Establish additional tuberculosis clinics with pneumothorax refill stations when funds are available.

(g) More X-ray surveys of Industrial groups by our mobile units.

This Division expects valuable suggestions as to its future operation from the committee of local Health officers recently appointed by the State Health Officer.

The problem of tuberculosis control is complicated and with the cooperation of local health units, the State Medical Society and other State Agencies which are concerned with Preventive Medicine, this Division contemplates a useful service.

YOU GIVE IT — WE SPEND IT

By JOSEPH A. STATON, HEALTH EDUCATION DIRECTOR
North Carolina Tuberculosis Association

YOUR hard earned cash is the **IT**—your North Carolina Tuberculosis Association is the **WE**. At this stage a lot of questions are probably coming to your mind. What is the State TB Association? How are you spending my dollars? Am I getting my money's worth? Stop, or this single article will become a serial. Seriously though, it is your right to ask . . . our responsibility not only to answer, but to answer satisfactorily.

What Is The North Carolina Tuberculosis Association?

NCTA is a health organization which is governed by a board of directors

representative of all walks of life as well as all parts of the state. The NCTA is affiliated with the National Tuberculosis Association in addition to the 122 intra-state affiliates. The units within North Carolina are as follows:

- 35 County Associations
- 2 City Associations
- 85 Tuberculosis Committees

122 Total (31 units have paid executive secretaries)

The staff consists of seven professional workers and four clerical workers with a collective background including health education, physical education, nursing,

sociology and school administration. Tax funds are not allotted your State Tuberculosis Association; sole means of support is through your purchase of Seals during the annual Christmas campaign. Your purchase of these Seals is entirely voluntary; this accounts for the classification—voluntary health agency. The association's primary objective since the date of its organization in 1906 has been the education of the individual and the community to the end that tuberculosis will be controlled, finally becoming non-existent.

How Your Dollars Are Spent

You are not going to be told that the dollars you contribute will be returned to North Carolina in case of an emergency and that you will then reap returns a thousand times more valuable than your contributions. Why? Because your dollars never leave the State. They remain here to be used daily in a control program fighting a disease that is with us day in, day out—year in, year out. Every dollar raised in each local Seal Sale is divided in the following manner: 75 cents is retained by the county association, 20 cents for the State Office functions, and 5 cents to the National Tuberculosis Association. If a full-time paid secretary is working in the county, 80 cents is retained locally. So you see 95 cents out of each dollar is expended right here in North Carolina. Tuberculosis, an endemic disease, is mentioned as far back as 5000 years B.C.—it is still with mankind claiming the lives of over 1,000 North Carolinians each year. Therefore the "emergency angle" is out; the forces operating against this disease must be at work constantly. Tuberculosis associations at all levels, National, State, and local work together in close harmony to achieve a common goal—the eventual eradication of tuberculosis.

Concisely, the answer to how your dollars are spent may be had in one word—**PROGRAM**. The term **program** is simply a total of the activities your tuberculosis associations engage in to help meet the health problems of the State and the local communities. To be

sure, emphasis and priority is placed on tuberculosis control, but the correlation existing between poor general health and tuberculosis is certainly recognized—consequently general health programs are assisted in every way possible. The program which exists within the broad pattern of education is constantly changing to meet needs which vary from year to year. In the interest of a more exact and detailed answer consider the following functions which the North Carolina Tuberculosis Association carried out in its 1947-48 program:

Coordination and Cooperation—Obviously tuberculosis control calls for extensive and diverse activities. Such a problem therefore demands that each official and voluntary health agency work together so as to avoid needless duplication and wasted effort. The NCTA has cooperated fully with all agencies interested in the health and welfare of our citizenry.

Organization and Administration—Members of the State staff work closely with communities in forming tuberculosis committees and associations. Our endeavor to return to the community in service 100 cents for each dollar received requires an efficient organization from the business standpoint. The NCTA strives to practice good business principles as well as to imbue them in newly formed units. It costs money to be businesslike, but it saves money in the long run. This 12 month period has seen the addition of 5 new tuberculosis committees and 1 association. The number of local executive secretaries was increased by 4.

Rehabilitation—A concerted effort was made to promote a total rehabilitation program for all patients with a history of tuberculosis. Grants totaling \$4,200.00 were given to four county and one State sanatoriums for aid in their rehabilitation program. These grants were to: Western Sanatorium, \$2,400.00; Guilford County, \$500.00; Wake County, \$500.00; Mecklenburg County, \$300.00; and Forsyth County, \$500.00. The NCTA has also paid the salary of a

full-time medical social worker who is on the staff of the Western Sanatorium at Black Mountain. Cooperation with the North Carolina Division of Vocational Rehabilitation has aided the development of this activity which hastens the return of the tuberculous patient to a useful, productive life.

Training—This service was conducted by the State Association on a pre-service and in-service basis. Newly employed executive secretaries attended orientation courses taught by State staff members. Local associations, committees and other organizations were assisted in planning and conducting institutes and conferences for physicians, nurses, ministers, teachers, and laymen. Nine such institutes were held. Five principal institutes were planned and conducted jointly with the School-Health Coordinating Service prior to the opening dates of the 1947-48 school term. A grant of \$2,075.00 was made to the School-Health Coordinating Service to pay for scholarships at summer conferences held at the University of North Carolina and the North Carolina College at Durham. The students enrolled in these summer workshops were presented lectures by members of the State staff, given opportunities for individual and group conferences, and supplied with over 1,000 pieces of literature. One fellowship was awarded a worker at the University of Michigan for concentrated study in health education. The State Association paid one-half of the expenses of this student, \$125.00. The NCTA cooperated with the American Trudeau Society and the medical schools of the University of North Carolina and Duke University in the sponsorship of a postgraduate course in thoracic diseases for Region III. Region III includes the following nine states and the District of Columbia: North Carolina, Maryland, Virginia, West Virginia, Kentucky, Tennessee, South Carolina, Georgia and Florida. The course was attended by 56 physicians from these states, and lectures were given by outstanding authorities from throughout the nation. Local associations cooperated splendid-

ly by offering scholarships to those doctors who were interested in attending the course. There were 15 North Carolina physicians that attended in addition to Tar Heel doctors serving on the instructional staff.

Research—All organizations looking forward to a productive future must develop new knowledge in their own fields and take advantage of current developments in related fields if they are to be successful. Therefore, research is the backbone of progress. 45 locals and the State Office have contributed to date \$2,000.00 to a special fund to support the NTA's well outlined research program which has been in effect since 1920. Two of the 18 studies under way are being carried on in North Carolina; one at the School of Medicine of Duke University and one at the State Sanatorium located in McCains, North Carolina.

Other Grants—The North Carolina Negro Student Health Association was given financial assistance in carrying on its program among the Negro colleges of the State, \$175.60. Grants of \$1,500.00 and \$283.00, respectively, were given to the University of North Carolina School of Public Health and Appalachian State Teachers College. The North Carolina Hospital Association was aided in its drive to recruit nurses. The NCTA gave a grant to the North Carolina Conference of Tuberculosis Secretaries to aid in the general promotion of the work of the Conference.

Legislation—The NCTA has never wavered in its belief that education is more basic than legislation and therefore legislative influence is sought only through fact-finding followed by a lucid presentation of pertinent data to the General Assembly.

Publicity Media—Newspapers, radios, magazines and other tools have been used to reach special groups as well as the general public with timely information. The monthly NCTA NEWS LETTER has a circulation of approximately 1,500. The SEAL SALE NEWS LETTER is issued periodically to Seal Sale Chairmen throughout the State. News releases are

supplied to all newspapers; feature stories, mats, editorials, pictures and health columns are also made available in order to keep the reading public abreast of important developments in tuberculosis control. **Tuberculosis Abstracts** were distributed by the State office to doctors serving on the board and to health officers. **The North Carolina Medical Journal** was also supplied with this Abstract and printed it in each issue. The **NTA BULLETIN**, monthly publication of the NTA, was sent to 602 people in this State. There has been a sharp increase in the number of radio stations in our State. The NCTA has contacted most of these stations and has offered information concerning tuberculosis to them. Twenty-three stations have used the "Constant Invader," a series of thirteen health education radio transcriptions which deal with tuberculosis, its cause, treatment, effect on the community and other important phases of tuberculosis control. During the Christmas Seal Sale the radio stations in our State were supplied with musical transcriptions, variety shows, spot announcements and scripts. All these items were furnished by the NCTA and its local affiliates to these radio stations without expense.

Supply Service—The National Tuberculosis Association produces educational aids for the nation; this bulk production greatly decreases the cost. Materials are in turn supplied on a non-profit basis to locals by the State office. The past year saw an increase in literature distribution. In addition to free material sent out on special projects, 226,139 pieces of literature exclusive of books were distributed by the NCTA. Literature was given to students at Duke and Bowman Gray Medical Schools and to health education students at the University of North Carolina and at North Carolina College in Durham. Health educators in the State were put on the list to receive samples of our materials periodically. Over 9,800 posters including industrial bulletin board posters were distributed to locals at a minimum fee direct from the

State office. About 20,000 teaching units were distributed to teachers throughout the State. **Suggested School Health Policies** were supplied upon request of the principals. As part of the supply service, the NCTA supplied locals with Seal Sale supplies on a 50-50 basis. An addition of two brought the number of films available for free use by responsible parties from the NCTA film library to 52. Requests for the use of these films totaling 292 came from schools, YMCA's and YWCA's, scoutmasters, public health nurses, health educators, county health departments and county tuberculosis associations. Members of the staff showed movies to women's clubs, institute groups, students, PTA's and YMCA's. An estimated audience for film showing is about 10,000.

Field Service—Much of the work of the NCTA is done on field trips by the members of the staff to all sections of the State. These representatives spent 933 man-days in the field traveling a total of 88,067 miles assisting and advising on the various phases of tuberculosis control work. In addition to the meetings attended in an advisory capacity, members of the State staff held more than 2,502 individual conferences and group interviews during the year. Talks and lectures were given to audiences totaling approximately 7,000 people. Mass X-ray surveys have also received the attention of the field secretaries. Much of the educational work done in many of the counties prior to the surveys was planned and participated in by members of the State staff.

Am I Getting My Money's Worth?

It is commensurate with the American way that you be given the facts and that you then draw your own conclusions. In this case, your conclusions will be the answer to this question, **AM I GETTING MY MONEY'S WORTH?** Provisions are taken to assure your receiving full dollar value. For example, all Seal Sale funds must be expended in accordance with Authorized Forms of Tuberculosis Work, which is a part of every Christmas Seal Contract. This

statement of approved activities represents the seasoned opinions of representatives from associations throughout the country. It cannot be denied that progress has been made. If the 1915 tuberculosis death rate of North Carolina had prevailed in 1947 rather than the actual rate of 28.4 deaths per 100,000 population, there would have been 5,815 deaths due to this disease—actually there were 1,056—a saving of 4,759 lives. (Based on estimated popu-

lation). Naturally, the credit for this must be divided among all health agencies—official and voluntary, as well as among the people. The 1947 Seal Sale in North Carolina was over \$367,000, approximately 100 times the amount of the 1912 Sale. This is certainly indicative of your faith in the program of the North Carolina Tuberculosis Association, as well as concrete evidence of your belief that you are getting your money's worth.

REHABILITATION—A MUST IN TUBERCULOSIS CONTROL

BY MISS ANNE MANN, FIELD SECRETARY
North Carolina Tuberculosis Association

A DEQUATE rehabilitation services are essential to a complete realization of the control of tuberculosis. Without benefit of rehabilitation the purposes of case finding, medical care and isolation are defeated. Tuberculosis is a chronic disease. One of its characteristics is that it relapses. A patient may leave the sanatorium in good health, but if he returns to unfavorable work conditions, all that has been done for him will be broken down. Many patients have to return to the sanatorium two, three or four times. This is not only a cause of despair for the patient, it is a public health hazard and a great economic loss to the community.

There are four aspects of the rehabilitation of the tuberculous: medical, psychological, social and economic. On the medical side the patient should have an intelligent knowledge of tuberculosis and of his own disease. He should know that only a small amount of infection demands a great amount of care. He should learn about curing, and how to cooperate with the doctors and nurses. Although he wishes to be active as soon as possible, he must learn that the physician alone can decide when activity is to start.

The psychological aspect is perhaps

the most difficult and one of the most important. The patient learns that tuberculosis is a recurrent disease and this usually frightens him. He worries over possible ostracism because people fear tuberculosis. He is separated from normal daily contacts. For these reasons the period of getting well should not be empty of incentive, plans and hopes. Bed rest by itself will not produce relaxation nor is there any speedy road to recovery. The need for guidance and help is great and it requires a seemingly endless amount of courage, perseverance and understanding.

The social problems of the tuberculous will range from the boy or girl required to leave school to the family losing its wage earner; from the ill worker who believes his job too good to leave, to the patient willing to go to the hospital but forced to remain on a long waiting list for a bed. If a patient fails to solve these social problems, it is almost impossible for him to respond to treatment in a favorable manner.

Lessened earning power is costly, not alone to the individual, but also the the community. Hospitals bear a share of the costs of the illness, but society as a whole pays the bill. Skill in any line grows rusty during long periods of ill-

ness, and this human asset is one that business and the community can ill afford to lose.

Rehabilitation works with the individual and the community to convert ill-founded fear into well-founded hope. It makes use of all available resources toward an eventual life plan compatible with the patient's health, interests, abilities and ambitions. The community must learn that although rehabilitation does cost money, the lack of it cost more.

The Division of Vocational Rehabilitation is doing an excellent job of rehabilitating the tuberculous here in North Carolina. But it is apparent that this agency alone cannot, under present conditions, meet all the needs of the patients. The North Carolina Tuberculosis Association is cooperating with this agency in the effort to render rehabilitation services to all patients. At the present time four counties have rehabilitation workers. These are: Mecklenburg, Guilford, Forsyth and Durham. It is hoped that Wake County will soon have a worker. In each instance, the salaries of these workers are either wholly or partially paid from Seal Sale funds. A grant from the North Carolina Tuberculosis Association to Western Sanatorium makes it possible for this hospital to have a full-time social worker.

Rehabilitation is a relatively new phase of the tuberculosis control program. Regrettably, there is still no widespread acceptance of the philosophy of rehabilitation. Fortunately, the National Tuberculosis Association, the office of Vocational Rehabilitation and the State and local rehabilitation departments are stimulating interest in this work. The vision of the leaders of these groups, and the whole-hearted cooperation of the community will eventually lead to a universal acceptance of the value of rehabilitation.

Rehabilitation has been defined as the restoration of the handicapped to the fullest physical, social, vocational and economic usefulness of which they are capable. While this adjustment may be made alone, it is one which is

achieved more easily with help and direction. This help must be given or we will fall short of our goal of eradicating tuberculosis.

The tasks of health education are not merely to teach the facts of the modern science of hygiene but ultimately to persuade men to apply these facts.

—Iago Goldston, M.D.

* * * * *

Health is something that all men desire and there is no limited supply for which nations must compete. Public health work carries no threat to anybody, anywhere. Cancer and scarlet fever have no political ideology.—Raymond B. Fosdick, *American Journal of Public Health*, January, 1948.

* * * * *

If the head of a family is stricken with tuberculosis the family's resources are exhausted in about one year. After that society takes care of the victim and his dependent children, and after his death gives his widow a pension. The expenditure in taking care of the results of the disease far exceeds the money spent for its eradication.—James H. Hutton, M.D., *Illinois M. J.*, April 1947.

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The unsolved problem of hospitalization of the tuberculous in this country poses many questions. In recent years over one-third of all deaths from pulmonary tuberculosis occurred outside of hospitals and institutions.—Herman E. Hilleboe, M.D.

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Medical services are not commodities that can be bought in standardized packages wherever and whenever one has the money to pay for them.—*Medicine in the Changing Order*, 1947.

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Instead of crying: "Can we afford some new service?" we are now tending to realize that we cannot afford ill-health and the resulting loss of productive work. We are beginning to realize that expenditure on preventive services and on health research pays an enormous dividend.—Sir Andre Davidson, *Brit. M. J.*, February 7, 1948.

Antivivisectionists Threaten Medical Research

CHICAGO—Sincere but misguided people who support antivivisection and the shrewd promoters who make a living from the movement are a real threat to medical research, points out an editorial which appears in the current (September 11) issue of *The Journal of the American Medical Association*.

The editorial follows in part:

"The antivivisectionists love publicity pointed to their angle, but screams of anguish and tearing of hair will soon be reflected in the antivivisectionist publication after the recent (July 24) article in the *Saturday Evening Post*, 'They're Trifling with Your Life.'

"This article designates the antivivisectionists as 'an obscure cult of sincere but misguided Americans—spurred by shrewd promoters—(which) now threatens to wipe out the techniques of medical research that have saved millions from horrible deaths.'

"The vast majority of antivivisectionists are apparently sincere but misguided. They are kindly people who love animals perhaps too well. Their noble sentiments make them easy prey to the shrewd promoter who makes his living by claiming that animals in laboratories suffer needless pain, and that money is needed to stop animal experimentation. The people who support the antivivisectionist movement have never been in laboratories and have only the vaguest concept of what constitutes scientific research.

"The combination of 'sentimental money,' as the gifts to antivivisectionism have been termed, plus shrewd promotion, embodies a real threat to medical research. Year after year the antivivisectionists have had bills introduced into the Congress of the United States

and into state legislatures 'exempting' the dog from service in the medical research laboratory. Such bills, one of which came perilously near enactment in a New York legislature, serve as publicity springboards even when they fail of enactment. If the so-called dog bill should ever go through the Congress in a preadjournment legislative jam the event would be a catastrophe. Although these bills in the Congress apply only to the District of Columbia, they would serve, if passed, as patterns to be copied in state legislatures.

"In addition to attempting to effect state and national legislation, the antivivisectionists, by creating uproar and emotional tension, have succeeded in diverting many stray dogs which used to be delivered to medical schools to the gas chamber at the dog pound, thus increasing the difficulties experienced by medical schools in procuring dogs for study. Finally, the antivivisectionists admit that the dog is used as their symbol because of mankind's universal love for dogs. If they once succeed in excluding dogs from use for medical research they will proceed to broaden this ban to include, first, cats, and gradually other animals.

"*The Saturday Evening Post* has done an important and significant service to the health of the American people in exposing the threat of antivivisectionism."

There can be no isolationism in the field of health. The fight against infectious disease is not a national or racial problem; it is a task for the whole of humanity. . . . The all-inclusive objective of any sound tuberculosis programme is the prevention and eventual eradication of tuberculosis from the peoples of the world.—**Bull. World Health Organization, 1948.**

Deaths from Tuberculosis by County and Race: 1947

COUNTY	PLACE OF DEATH				PLACE OF RESIDENCE							
	RESPIRATORY		OTHER		TOTAL		RESPIRATORY		OTHER		TOTAL	
	White	Other	White	Other	White	Other	White	Other	White	Other	White	Other
Alamance	8	5	---	1	8	6	9	6	1	1	10	7
Alexander	1	---	---	---	1	---	3	1	---	---	3	1
Alleghany	1	---	---	---	1	---	1	---	---	---	1	---
Anson	2	3	---	---	2	3	2	4	---	---	2	4
Ashe	2	---	1	---	3	---	5	---	2	---	7	---
Avery	4	---	---	---	4	---	5	---	---	---	5	---
Beaufort	2	6	---	1	2	7	4	9	---	1	4	10
Bertie	1	3	---	---	1	3	2	7	---	---	2	7
Bladen	1	2	---	---	1	2	2	5	---	---	2	5
Brunswick	2	---	---	---	2	---	2	1	---	---	2	1
Buncombe	171	65	4	4	175	69	28	18	4	4	32	22
Burke	7	---	1	---	8	---	8	2	---	---	8	2
Cabarrus	2	2	---	---	2	2	4	2	---	---	4	2
Caldwell	5	---	---	---	5	---	4	1	---	---	4	1
Camden	1	2	---	---	1	2	1	2	---	---	1	2
Carteret	2	---	---	---	2	---	2	---	---	---	2	---
Caswell	---	1	---	---	1	---	---	3	---	---	---	3
Catawba	---	1	---	---	1	---	2	---	1	---	3	---
Chatham	---	---	---	---	---	---	1	2	---	---	1	2
Cherokee	---	---	---	---	---	---	1	---	---	---	1	---
Chowan	1	1	---	---	1	1	2	1	---	---	2	1
Clay	1	---	---	---	1	---	1	---	---	---	1	---
Cleveland	2	3	---	---	2	3	3	6	---	---	3	6
Columbus	6	---	---	---	6	---	5	10	---	---	5	10
Craven	4	---	---	---	4	---	7	11	---	1	7	12
Cumberland	3	13	---	1	3	14	3	15	---	---	3	15
Currituck	2	---	---	---	2	---	1	1	---	---	1	1
Dare	---	---	---	---	---	---	---	---	---	---	---	---
Davidson	6	---	---	---	6	---	9	1	1	---	10	1
Davie	1	2	---	---	2	1	1	2	2	---	3	2
Duplin	4	1	1	1	5	5	4	9	1	2	5	11
Durham	11	26	3	5	14	31	6	25	---	2	6	27
Edgecombe	8	18	---	---	8	18	11	19	---	---	11	19
Forsyth	14	30	2	5	16	35	12	36	1	4	13	40
Franklin	2	2	---	---	2	2	3	6	---	---	3	6
Gaston	6	3	---	---	6	3	11	3	1	---	12	3
Gates	3	---	---	---	3	---	3	3	---	---	3	3
Graham	---	1	---	1	---	---	---	1	---	---	1	---
Granville	3	5	---	1	3	6	3	9	---	1	3	10
Greene	5	---	---	---	5	---	7	---	1	---	8	8
Guilford	15	16	---	1	15	17	18	14	---	1	18	15
Halifax	3	14	---	4	3	18	4	19	1	4	5	23
Harnett	2	1	---	---	2	1	4	9	---	1	4	10
Haywood	4	---	1	---	5	---	7	---	---	---	7	---
Henderson	---	---	---	---	---	---	3	---	---	---	3	---
Hertford	2	---	---	1	---	3	2	4	---	2	2	6
Hoke	37	104	2	3	39	107	5	2	1	---	6	2
Hyde	---	---	1	---	1	---	2	---	1	---	3	3
Iredell	3	---	---	---	3	---	2	8	---	---	2	8
Jackson	1	1	---	---	1	1	1	1	---	1	1	2
Johnston	8	2	---	---	8	2	10	12	---	1	10	13

Deaths from Tuberculosis by County and Race: 1947

COUNTY	PLACE OF DEATH						PLACE OF RESIDENCE					
	RESPIRATORY		OTHER		TOTAL		RESPIRATORY		OTHER		TOTAL	
	White	Other	White	Other	White	Other		White	Other	White	Other	
Jones	2					2		2				2
Lee	1		1		1	2		2		1		2
Lenoir	9	8		1	9	9		7	15		1	16
Lincoln												
McDowell	2	1			2	1		3	1		3	1
Macon	1		1		2			1		1		2
Madison	1		1		2			2		1		3
Martin	4	5		1	4	6		5	7		3	10
Mecklenburg	17	28	2	2	19	30		14	33		1	14
Mitchell	2				2			2				2
Montgomery								1	2			1
Moore	1			1	1	1		1	2		1	3
Nash	13	15	1	8	14	23		10	25	1	5	30
New Hanover	2	3	1	2	3	5		1	14	1	2	16
Northampton	2	6		1	2	7		3	10		3	13
Onslow	1	4			1	4		2	3			3
Orange		1				1		1	3			3
Pamlico								1	2			1
Pasquotank	2	3			2	3		3	6		1	7
Pender	1					1		1	5			5
Perquimans		1				1			1			1
Person								2	1			1
Pitt	4	7		4	4	11		7	18		4	22
Polk	1				1			2				2
Randolph	2				2			2	4			4
Richmond	2	3			2	3		5	4			5
Robeson	3	12		1	3	13		4	16		1	17
Rockingham	3	4			3	4		7	7			7
Rowan	2	6			2	6		5	9			9
Rutherford	2	1			2	1		3	2			2
Sampson	1	5		1	1	6		2	10		1	11
Scotland	1	2			1	2		3	5			5
Stanly	1	1			1	1		2	2			2
Stokes	3				3			3				3
Surry	7		1		8			11	3	1		12
Swain				1		1		1				1
Transylvania	1				1			3				3
Tyrrell												
Union		2				2		1	4	1		4
Vance	4	8			4	8		6	10		1	11
Wake	14	18		2	14	20		9	24		2	26
Warren	1	1			1	1		1	4			4
Washington		1				1			3			3
Watauga								1				1
Wayne	4	82		1	4	83		7	13	1	1	14
Wilkes	1	1			1	1		5	1			1
Wilson	15	30	2	1	17	31		7	19	1		8
Yadkin												
Yancey								1				1
Total	468	619	29	57	497	676		385	590	26	55	411
Total	1087		86		1173			975		81		1056

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The Health Bulletin

Published by THE NORTH CAROLINA STATE BOARD OF HEALTH

This Bulletin will be sent free to any citizen of the State upon request.

Published monthly at the office of the Secretary of the Board, Raleigh, N. C.
Entered as second-class matter at Postoffice at Raleigh, N. C. under Act of August 24, 1912

Vol. 63

DECEMBER, 1948

No. 12



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SPECIAL LITERATURE ON MATERNITY AND INFANCY

The following special literature on the subjects listed below will be sent free to any citizen of the State on request to the State Board of Health, Raleigh, North Carolina.

Prenatal Care.	Baby's Daily Schedule.
Prenatal Letters (series of nine monthly letters).	First Four Months.
The Expectant Mother.	Five and Six Months.
Infant Care.	Seven and Eight Months.
The Prevention of Infantile Diarrhea.	Nine Months to One Year.
Breast Feeding.	One to Two Years.
Table of Heights and Weights.	Two to Six Years.
	Instructions for North Carolina Midwives.

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THE Health Bulletin



PUBLISHED BY THE NORTH CAROLINA STATE BOARD OF HEALTH

Vol. 63

DECEMBER, 1948

No. 12

J. W. R. NORTON, M.D., M.P.H., State Health Officer

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PUBLIC HEALTH AND NUTRITION

North Carolina State Nutrition Committee

October 9, 1948

By E. G. McGAVRAN*, M.D., M.P.H.

To speak of Public Health and Nutrition is to speak of peaches and cream, of Damon and Pythias and law and order. Nutrition is the right arm of Public Health. It is and should be an essential part of Personal and Public Health and an active part of every Health Department program, Local, State and National.

I am sure that you who are nutritionists are used to hearing this type of "lip service" from Medical and Public Health people. It is not insincere or superficial but it is frequently limited to theoretical support of platitudinous truisms. Let me hasten to add that Health Departments are not the only agencies that give lip service to nutrition. Even some Departments of Agriculture, Departments of Welfare, Departments of Education, Extension Services and Farmer's Home Administration do the same. It is not so much a question of the acceptance of the importance of nutrition but rather a question of priority given to Nutritional programs by these agencies and the public.

Medical Science, of which Nutritional Science is a part, has far out-stripped our application of it to Society—the prevention of unnecessary illness, suf-

fering and death—the improvement of efficiency and positive well being lags far behind our knowledge. The public is just beginning to realize how great the discrepancy is between our function and service and those functions and services we should be giving to protect the Public Health to the best of our knowledge and ability.

Many here this morning will remember the statements of Sir Wilson Jameson, Chief Medical Officer of Britain's Ministry of Health at a recent meeting of the American Public Health Association. "The newer knowledge of nutrition was applied for the first time, on a nationwide scale, to the feeding of the people in Britain" during the war. And the results were arresting. Comparing vital statistics of England and Wales for 1939 and 1945, Sir Wilson reported that the maternal mortality rate (excluding abortions and infections) was reduced 38%, the stillbirth rate declined 28%, the infant mortality rate 13%, and the neonatal mortality rate 13%. The fall in these rates continued in 1946 and the new figures were the lowest ever recorded in that country. Sir Wilson felt that there was "no doubt whatever that these results are due in the main to the priorities in essential food-stuffs granted to the mothers and children of Britain under a wide system of wartime rationing." The

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prediction of the Minister of Food, Lord Woolton, was fulfilled—by the application of the scientific knowledge of food, Britain's next generation can approach its difficult task with healthy bodies. "I believe that we can go through the war with no real malnutrition amongst the children of this nation." And all this, mind you, in spite of civil disruption, all-out war, bombs and rockets, blockades and shortages, limited health and medical facilities.

The results, I have said, are revealed in the vital statistics of England and Wales as a very impressive betterment of such health indices as the maternal death rate, stillbirth rate, infant death rate and neonatal death rate (the latter having to do with the number of infants who die in the first month of life, while infant death rate expresses the number of deaths in the first year of life.) This experience is of unusual significance to the health officer aware as he is of the great decrease in the infant death rate, with a resulting prolongation of life, which has awarded his efforts in communicable disease control. He realizes that besides holding tenaciously to the ground already won in the battle against infection, he must apply new technics, new nutritional knowledge, if infant and maternal mortality is to be further reduced significantly.

This betterment of the health of mothers and infants in wartime Britain was not unexpected in as much as workers in Canada, Britain and the United States had already demonstrated that the health of both mother and infant is measurably affected by the quality of her diet during pregnancy. In many studies significant reduction in the maternal death rate, toxemias of pregnancy, premature rates and infant death rates were demonstrated among mothers and infants receiving adequate diets.

If this significant reduction in the unnecessary deaths of mothers and infants can be accomplished by providing good nutritional supplements in a country at war under constant bombing, shortage of food and displacement

of personnel and crowding, who will say that it cannot be done in this land of opportunity and plenty?

We have here a challenge to Nutrition and Public Health. Not only do we have the scientific knowledge of how to prevent these unnecessary deaths and illnesses among mothers and infants, but we have a national demonstration that it has been done under the most adverse conditions. It will be no easy task to do through education and the democratic process what apparently was done in England only under rigid governmental control, but the very basis of our concept of government and civilization is at stake if we allow that regimentation and governmental control can do for our health and that of our children what freedom and democracy cannot.

Let us now turn our attention to public health programs directed towards the improvement of health in the first two years of life. For many years the place of nutrition in these programs has been well accepted. Let us review the literature in an effort to determine whether or not we have met a minimum goal; namely the prevention of deficiency diseases.

It is accepted by all that the characteristic, rather uniform diet of the infant is very likely indeed to produce deficiency disease unless it is supplemented with adequate sources of ascorbic acid, vitamin D and iron. I wish to pay tribute to the great services rendered by the pediatricians and medical practitioners in the prevention of both the nutritional and communicable diseases of infants. Due to their efforts scurvy and rickets are seen much less frequently than was once the case, and unfortunately, the impression may be gained that these deficiency states have all but disappeared. Repeated studies show that rickets still exists in from 20% to 90% of infants and young children and that scurvy is found in as high as 11% of certain infant population groups. I think you will agree that the eradication of these diseases by modern public health practice is a goal worthy of consideration along with the

eradication of such communicable diseases as diphtheria.

Time, or your patience, does not permit me to go into the many other neglected nutritional fields of Public Health. The tragic story of Dental caries and the easy solution that we could apply through properly controlled fluoride intake. The Hot Lunch Program of the Public Schools—convenience programs geared, at best, to a fattening concept rather than an educational concept. Here vast funds, Local and Federal, are used but used unwisely or injudiciously.

There is surely no need for further spelling out our lack of application of scientific knowledge of Nutrition to the Public Health. There is another reason for the "lag" and for the lack of emphasis and priority given Nutrition. Traditionally we have emphasized control of communicable diseases, and sanitation of the environment, because these at one time were our primary cause of illnesses and deaths. This time has passed long since but we still cling to the traditional programs, functions and services. Too often Public Health is empirical in its approach. A diagnosis of the various ailments of society—our Society, our community, our country, city or state is not made and the treatment is prescribed without balancing the relative importance of one ailment over another or of the efficiency of one form of treatment over another.

This is a rather serious indictment but it is unfortunately only too well deserved. The best excuse we have for the condition is that modern scientific Public Health requires trained staff, personnel and funds far in excess of what has been given, and with the dire shortage of personnel and funds all that can be done frequently is the traditional empirical service that is steadily becoming less and less geared to modern scientific knowledge.

This brings me finally to the conclusion that Nutrition should not be separated from Public Health. We gain nothing and may lose much if, for example, we try to concentrate exclusively upon the nutrition of pregnant

women or young infants. It is only as Nutrition is integrated with all the problems of pregnancy and infancy that it can assume its just place. We do not need to lobby for more **applied nutrition**; we do need to lobby for more applied **public health** in which nutrition plays its proper role and holds its proportionate place. Here again we need the coordinating efforts of just such an agency as this State-Wide Nutrition Committee including the representatives of the Agriculture Department, the Welfare Department, the Departments of Education, Extension Services and Farmer's Home Administration. No one of these agencies, alone, can convince the public of the need and urgency for Health Funds adequate to provide trained and qualified health workers in sufficient numbers to render modern scientific health service.

Only if all the specialties and agencies interested in the public health pull together as a team can we hope to lift ourselves out of the rut of Tradition and Empiricism and get the personnel and funds necessary to carry on health programs geared to advanced Medical and Nutritional knowledge.

A better Health—a vastly better Health for all our people—is in our grasp if we as individuals and agencies pool our efforts to translate Nutritional Science into Nutritional practice.

Motorists can't see pedestrians at night as easily as pedestrians can see autos. The National Safety Council says that fundamental fact should make walkers extra careful. Don't spend a lifetime in crossing streets!

When is right wrong? When you are walking on the highway, according to the National Safety Council. Always walk on the left side of the road, so you can see approaching cars and get out of the way.

Sprinkle salt on icy sidewalks or mix salt with sand or cinders to prevent winter falls, the National Safety Council suggests.

ELEMENTARY FACTS ABOUT X-RAY DIAGNOSIS

By ROBERT WILLIAMS, M.D.
Raleigh, North Carolina

X-rays were discovered by William Conrad Roentgen, a German physicist* in 1895, and were seized upon immediately by physicians for diagnosis and treatment.

Within the space of eight years, Dr. W. A. Pusey of New York published a large book which embodied the knowledge accumulated about this new agent. A review of this volume impresses the reader with the quick grasp which the earlier workers displayed in their use of the great discovery. It was during this period that living human beings were made literally transparent by the penetrating X-ray, and knowledge of disease, previously available only at post-mortem examinations, was acquired while the patient was still alive and curable.

The first experimenters with X-rays, ignorant of its dangers, frequently suffered burns of the skin as a result of over-exposure to the rays. As a consequence, physicians and the general public became fearful of the apparatus. In time, the nature of X-rays was better understood. Development of modern tubes and accessory equipment in conjunction with practical experience gained in their use minimized the inherent dangers of the rays. In a sense the rays are no more dangerous than other powerful types of energy such as fire and electricity which also require certain precautions for safety. X-rays in medical diagnosis are now used so routinely that no one fears their use in the hands of qualified persons.

The past hundred years which have brought such wealth of scientific and inventive achievement as to eclipse all previous history have been characterized by a similar disproportionate development of medicine. The X-ray figured so prominently in that development that we cannot imagine what medical practice today would be without it.

Essential as it is to medical diagnosis,

the X-ray is by no means all important as some people believe. There are many diseases the diagnosis of which depends in no way upon the X-ray. Only a physician can judge what kind of examination is in order. Diagnosis is usually made by the patient's own account of his illness and by physical examination combined with appropriate laboratory and X-ray procedures.

Many people after observing an X-ray laboratory are struck by the question: "What is the difference between an 'X-ray' and a 'fluoroscope'?" The answer to that one is: "They are both ways of using X-rays." To explain the above question—an X-ray refers to an X-ray photograph or film. This film resembles superficially the negative made by an ordinary camera, but in the case of the X-ray film the rays have penetrated something solid before they reach the film whereas the camera records reflected light rays. A fluoroscope consists simply of an X-ray tube and a fluorescent screen or placard. The rays, directed through the body, emerge to strike the screen and form a fluorescent image which is so dim as to be visible only in a darkened room.

The fluorescent image is temporary, lasting so long as the X-ray tube, sending rays through the patient, is turned on.

With the fluoroscope there is the advantage of seeing the organs of the body in motion as in a movie. The expense of a film is not involved by this method.

The permanent film is obviously a "still" picture but has the merit of being clearer than the fluoroscopic image, and, furthermore, provides a permanent record which may be necessary for comparison with subsequent films made at a later date when the condition of the patient has changed for better or worse.

Sometimes a complete examination requires both films and fluoroscopy.

The fluoroscope in use today has not

changed fundamentally from the first model, but we may expect radical improvement if a modification recently announced in the newspapers measures up to promise. Preliminary work has been done involving electronic amplification of the fluorescent image to make it immensely brighter. Only those who are familiar with the present apparatus can appreciate how much such an improvement would mean. It is reasonable to anticipate more accurate examination, performed in shorter time and more safely.

Reference was made to the expense of X-ray films. Not only have films been expensive, but during recent years the supply of films has often been exceeded by demand so that shortages have resulted.

An ingenious way of using less film in chest examinations was devised shortly before the last war. This method was to place a camera behind the fluorescent screen. When X-rays were directed through the chest the fluorescent image was photographed by the camera on very small film less than two inches long, like that used in the miniature cameras. The conventional chest film, which is life-size, is fourteen by seventeen inches.

Using the tiny films the expense was fractional compared to the regular procedure, and time was saved in development and interpretation. Mass chest surveys became feasible on a scale never before considered possible. The armed services and public health agencies have pushed this means of examining chests so that every one is familiar with the procedure. Of particular value are mass chest surveys in detecting unsuspected cases of tuberculosis which can be treated at a time when treatment gives the best chance of cure and at a saving of months or years of treatment time.

While the small films used in chest surveys enable a high degree of accuracy in interpretation, such films, when indicative of disease, are checked by larger, conventional films which are needed for more exact diagnosis.

Anyone who has ever looked at an

X-ray photograph, or roentgenogram, realizes that what is visible on the film is not a picture but a shadow image representing all the body structures the rays have passed through, and these structures though separate and distinct are all superimposed upon each other on the film. If it were not for the fact that the different types of tissues, including the bones, are of different densities, the resultant image on the film would have no detail. A roentgenogram of a hand would appear as a white profile or silhouette. What actually happens is that the rays penetrate the fleshy part of the hands and fingers easily and these appear gray to black on the film, whereas, the bones, being heavier or denser, hold back the rays and are registered as white. In other words, where the rays are able to get through easily and in large quantity they cause the film to turn black, but where they are held back by heavy structures the film is left white.

The organs of the body, including the bones are of varied density and are consequently represented on the film as different shades between black and white, so that their outline, or profile, as well as details of their structures, is shown. An actual look at a film is worth far more, of course, than a verbal description.

Because they are relatively heavy, bones are usually the most conspicuous feature of an X-ray film, and a chest film, for example, is characterized by the prominence of the ribs which appear white. The lungs, less dense because of their air content, appear black. When the lung is affected by tuberculosis, the diseased portions lose their spongy consistency and become comparatively solid. These areas appear on the film as white or gray against the darker background of the normal lung.

The abdomen and trunk contain organs which are of similar density and are, therefore, less easily distinguished since there is little or no contrast between their shadows. The same difficulty would be experienced in attempting to see an animal whose color was

the same as his background; a polar bear against the snow would be thus camouflaged.

The stomach is ordinarily seen in two ways on an X-ray film. If it contains air, as it usually does, the air, which contrasts sharply with the surrounding tissues, causes the stomach to stand out in relief. A more effective method of showing the stomach is to have the patient swallow barium sulfate, a powdery substance of greater weight than the body tissues; the barium casts a heavier shadow than these tissues, forming an outline of the stomach. The barium coats the lining of the stomach which is corrugated and a pattern of the interior is formed.

So it is with other portions of the intestinal tract.

An ulcer of the stomach is a hole or pit in the lining. When barium fills the ulcer it is visible, when seen in profile, as a small projection beyond the normal contour of the stomach.

Barium provides one means of con-

trast and is called a contrast medium. There are other contrast media. Research has provided iodine compounds which injected into a vein are circulated by the blood to the kidneys where they are excreted, forming an outline of the interior of the kidneys, ureters, and bladder. Another iodine compound, given by mouth, is excreted by the liver and then concentrated in the gallbladder which thereby becomes visible.

The spinal canal, the blood vessels, including the heart, and other body cavities can be filled with similar X-ray opaque drugs which provide a way of studying the shape of these parts. The interior of the brain can be outlined by air injected into the spinal canal which connects with the brain. In every instance it is the contrast substance that is seen. It is like a mold the interior of which we cannot see until we have made a cast of it.

It can be said that X-ray diagnosis depends on a knowledge of anatomy and disease interpreted in terms of the peculiar shadows on a film.

PULMONARY TUBERCULOSIS

Annual Address (1948) of

HAMILTON W. STEVENS, M.D., President
North Carolina Public Health Association
Wilson, North Carolina

To the members of the North Carolina Public Health Association, Honored Guests, and Visitors. It has become a custom or a tradition that each year your Elected President address the North Carolina Public Health Association during its annual meeting. Whether this is to find out if you have a capable President or a foolish one, I do not know, but I am going to accept this customary procedure and speak briefly on subjects which, I think, of great importance to the Public Health Workers of North Carolina. There are many problems that beset us in the field of Public Health, to which we need a solution. Just to name a few; there is the problem of milk control, with proper

state wide rules and regulations controlling this important food sanitation item for our citizens. There is also the problem of a shortage of nurses throughout our departments, also in our hospitals, and other institutions. There is an increasing problem of budgetary financing in our local health departments, which in the past, our state has deemed to disregard. Our state finances only 10% of our health needs on a local basis, and 85% of our educational needs on a local basis. It seems that education is much more important than our mental and physical health.

There is an older grievance which was with us back in the days of the first State Health Department in North

Carolina, when Dr. Thomas F. Wood of Wilmington, in 1870's directed his efforts through our State Medical Society, to establish the North Carolina State Board of Health. Even before this date the citizens of our state, individually and collectively, had to think in serious terms of combating, controlling, and preventing the subject of this speech. I am going to talk to you about, "Pulmonary tuberculosis," an old topic, one of which you have heard many thousands of words. We are entering a new phase in the field of Public Health, particularly in the field of eradicating an ancient and deadly foe. It is not surprising that in our work we have accomplished good, in fact it is to compliment ourselves when we review our past history in certain diseases. We have done much, even in the past fifteen years. In 1934 our death rate from diphtheria per hundred thousand was approximately 6 infants, now it is less than one, from tuberculosis it was approximately 62 citizens—died in 1934, now it is twenty-five. From typhoid fever approximately 2 people out of a hundred thousand died in 1934, now it is rarely a death from typhoid. We have done even better in the care of our mothers and infants. In 1934 seventy-eight infants and 8 mothers died for every one thousand live births, now only about 35 infants and only one mother dies for every thousand births. This proves to our general satisfaction that our efforts in preventive medicine can accomplish our objective; by making our citizens healthier, they will live longer and fewer of them will die. It is noticeable that relative to pulmonary tuberculosis we have reduced the crude death rate per hundred thousand population a little over fifty per cent in the past fifteen years. In some of our other death rates, such as from diphtheria, typhoid, or whooping cough, we have reduced that rate much more than fifty per cent in the past fifteen years.

We now have at our disposal and within our means, a method and a way to entirely eradicate pulmonary tuberculosis in this state. This disease is contagious as much so as: diphtheria,

whooping cough, or any other contagious disease, and it is no reason at all why we should not direct our efforts towards lowering our death rate from tuberculosis. About four years ago, a bureau of tuberculosis control was established in the State Board of Health, forming a unit around the services of a Mass X-ray Survey. It has been proven by the usage of mass surveys for pulmonary tuberculosis that new cases of tuberculosis can be found and put under control, and eventually, if given time, the death rate from that disease should drop accordingly. There has been made in this state a total of 525,146 X-rays by our State Bureau of Tuberculosis Control. We find that approximately eight film per thousand are suspicious of tuberculosis, and between one and two per thousand, definitely have tuberculosis, and that approximately 5 films per thousand have other pulmonary disease, such as heart trouble, cancer, bronchiectasis, and other pathological diseases of the chest. From this it is easy to assume that in a county of approximately fifty thousand citizens, we would be expected to find a hundred definite cases of tuberculosis, several hundred more of which, we will have to follow-up and make a final diagnosis. Even now, we in the field of Public Health, are doing good work in detection of tuberculosis, so much so, that it is becoming embarrassing to you who work in health departments throughout the state. Not only are our efforts towards finding new cases of tuberculosis and eradicating this disease becoming embarrassing, but it is becoming also discouraging; I use this word **discouraging** because I know of several counties that had the forethought and expended considerable effort to conduct mass surveys among their citizens and who in turn have found several hundred cases of pulmonary tuberculosis. And even now, one year later, they find those cases still at home. While these cases of newly found pulmonary tuberculosis are still at home, I am going to give you, individually and collectively, as workers in the field of Public Health, a back

handed compliment. The citizens of this state have not caught up with you, I know that they are progressive and anxious to improve their health, and their modes of living, but for some reason or other, we find ourselves in a terrible dilemma. We now have the methods and means of finding tuberculosis, preventing tuberculosis, and eradicating tuberculosis, **but there are not enough beds in our good state to take care of a curative problem relative to tuberculosis.** It is time that we seriously make an effort to educate our citizenry to the need of more beds for the cure of pulmonary tuberculosis in North Carolina. Now is not only the time, but it is imperative that we meet this problem and abate this problem now, **at the present.** We have several dozen tuberculosis patients under home quarantine in every county in the state with few exceptions, this due to lack of bed space in our Tuberculosis Sanatoriums. If these tuberculosis victims were Poliomyelitis or even Smallpox patients, our citizens would become greatly alarmed or outraged. A tubercular patient is a menace to his family and to the public at large. This disease is more than just an illness. It strikes down our bread winners, men and women in their prime of life. **It is our greatest liability among diseases from an economic viewpoint.** If our body politic were all bankers or industrialists, I guarantee, they would seriously consider pulmonary tuberculosis as a disease that reduces tax payment, curtails living standards and produces poverty in even our best families.

We have approximately 1100 tubercular beds controlled by our state, around 900 beds in county institutions, and around 300 tubercular beds in our mental and other institutions controlled by the state! This gives us a total of approximately 2300 beds for pulmonary tuberculosis throughout the State of North Carolina. According to my best informed sources, the United States Public Health Service recommends two and a half beds per death in any state. They have repeated this recommendation many times, and I quote "Public

Health Service and the National Tuberculosis Association has arrived at the deduction that communities that have two and a half beds per death per year from tuberculosis, experience a prompt and marked decline in the death rate from pulmonary tuberculosis." So here we are, with many of our local health departments directing their efforts towards the eradication of this dreadful disease, and finding themselves with many patients on their hands for periods varying from two months to a year, before these patients can become hospitalized. Our total number of deaths from pulmonary tuberculosis last year was approximately 1250, and by using the previously quoted quotation, we can assume that two and half beds times 1250 will give us the actual need of our state. That figure would be derived at approximately 3000 or 3100 beds for the curative need of pulmonary tuberculosis. From this we can see if we need **3100** beds and have only **2300**, then we have a deficiency of approximately **700** beds for our known cases of pulmonary tuberculosis. Now I wish to compliment the Board of Directors of our State Sanatoriums. This Board of Directors have seen the need for additional beds and a committee was appointed to investigate this need. During our last Legislation in General Assembly, authorization for an additional 270 beds was approved for our State Sanatoriums when our need is for at least 700 beds. Two years have passed and these additional beds have not been constructed. The appropriation for such could not construct that number as costs have increased too rapidly. And that is where the issue stands. It is of dire importance in our work, and for the good of the health of our citizens, that our next General Assembly be informed, not only by an active and hard working committee, but by our representatives from each county, that we have patients waiting at home, and that these patients can and are spreading tuberculosis to other citizens in your county, and that these patients are a danger to the individual and to the health of the community as a whole. We need to

encourage an appropriate budget for our State Sanatorium that will include the construction of a minimum of 600 beds, additional to what they have at present. And while on this subject, I wish to mention for the benefit of our Public Health workers from the West, we do not have any Negro beds for the cure of pulmonary tuberculosis in the West. I note that in the city of Asheville, there are approximately 17,000 Negro citizens, and they in turn must be sent to the Piedmont section of our State at McCains, North Carolina for curative care. I mention this for I see in front of me many health departments represented from the Western part of North Carolina, and I know that they too have their problems in trying to get a patient with tuberculosis admitted to a curative bed somewhere in the state. I wish to say that the com-

mittee, I previously mentioned, has recommended that a hundred beds for Negroes be constructed at our Sanatorium in Black Mountain, and that 200 beds be constructed at our Eastern Sanatorium in Wilson for both white and Negro, and that a new Sanatorium be constructed at Chapel Hill consisting of four hundred beds. This is a total of 700 beds. I personally feel that these are excellent recommendations, and should meet the approval from every health worker in the state. Now I ask of you, if this does meet with your approval, that you go back home and educate your citizenry relative to these needs, and then, I believe, your representatives in our General Assembly will certainly act, and act quickly, as we need our beds now, and then we can eradicate pulmonary tuberculosis, completely, throughout our good state. Thank you.

THE EVOLUTION OF PUBLIC HEALTH IN NORTH CAROLINA

By WILLIAM H. RICHARDSON

State Board of Health

Raleigh, North Carolina

Almost everyone now is familiar with the broad objectives of Public Health. However, there are still many who fail to take advantage of all the opportunities it offers. Generally speaking, the popular conception of Public Health is that it is a medium through which the public is afforded mass protection, including immunization against prevailing preventable diseases and necessary sanitation against filth-borne diseases. This conception is correct, as to generalities. However, the problems of Public Health have changed, from time to time.

A study of the history of the State Board of Health, since it was created by the General Assembly in 1877, reveals some interesting facts. For example, the first pamphlet ever issued by the Board was called "Timely Aid

for the Drowned and Suffocated." Later, such subjects as diphtheria, disinfection, drainage, drinking water and post-mortem examinations were taken up.

As early as 1886 The Health Bulletin made its appearance. That same year, the late Dr. Richard H. Lewis prepared a pamphlet on "The Care of Eyes and Ears." The following year—1887—the people of North Carolina were frightened by what they thought was the prospect of an epidemic of yellow fever. During the fall of that year, a patient suffering from this dread disease was smuggled into the port of Key West, Florida. Much interest and discussion in the Board membership and throughout the state of North Carolina centered about the necessity for providing some safe method of preventing the introduction of yellow fever into North

Carolina. The following year, it seems, an epidemic did break out in Florida, and refugees to Western North Carolina demonstrated the value of a Board of Health to cope with the situation.

By this time, the people were becoming "sanitary conscious." In 1889, a sanitary convention was held in Raleigh and was largely attended by physicians and others, from many cities and towns, who were much concerned about the problems of a pure water supply and sewage disposal. The State Board of Health published an exhaustive paper by Dr. H. T. Bahnson, of Winston-Salem, then President of the Board, entitled: "The Public Water Supply of Towns and Cities in North Carolina." Providing refuge for hundreds of people who had fled from their homes further South, on account of yellow fever, continued to constitute a grave problem.

Many of us think of 1918 as the year in which influenza made its appearance in North Carolina, during the closing months of World War I. Here is an interesting disillusionment. A widespread epidemic of influenza or, as it was commonly called, at that time, "grip" or "la grippe," spread over the State in January of 1890. The epidemic appeared first in Russia, about November 1, 1889. By the middle of the following month, 200,000 cases were reported in New York alone. It struck North Carolina in January and, in two weeks' time, victims were reported in 68 counties of this state. Influenza continued to be present in all sections throughout 1891 so, you see, influenza is no new problem in North Carolina; but, it is doubtful if that disease ever again works the havoc it has in the past. Nevertheless, we still have enough serious health problems to keep us busy, and we still have flu, often followed by pneumonia.

Since its creation, the State Board of Health has worked in cooperation with the State Medical Society, to which it owes its very existence. In 1898, according to the record, the annual address of Dr. Francis Duffy of New Bern, then president of the society, was devoted almost exclusively to the promotion of

Public Health. In this address, Dr. Duffy sounded an advanced note in behalf of human progress.

By this time, Dr. Richard H. Lewis, part-time State Health officer, devoted a great deal of time and energy trying to arouse the people of the state to the necessity of being vaccinated against smallpox. During this period, smallpox, now almost unknown in North Carolina, prevailed extensively in many counties of the State.

In 1911, the effectiveness of vaccination against smallpox had become so convincing that quarantine, as a means of control, was abandoned. This aroused considerable comment—and even some bitter opposition—but Public Health held firm in its contention that the time had come when protection against smallpox was a responsibility of the population itself, and that, with a means of sure prevention at their command, there was no excuse for people to contract a disease which could now be controlled. The time was when smallpox deaths were numerous throughout North Carolina every year. For the past decade or so, these deaths have been negligible. There have been only two or three in the past ten-year period. Of course, the removal of any contagious disease out from under quarantine must be done after a thorough consideration of all the factors involved. As to smallpox, there was a time when pest houses, all over the State, were filled with patients suffering from a disease that was, even then, known to be preventable. This was poor economy, indeed. There was no increase in the number of smallpox cases following the removal of quarantine. The trend has been steadily downward since vaccination became a universal precaution.

There is no reason why diphtheria should not be as rare as smallpox. It, too, is a preventable disease. And yet, children continue to die of diphtheria, chargeable to the neglect of parents and guardians.

Diphtheria is not only preventable, through the application of scientific discovery, but there is a law requiring immunization against it. We are all too

prone to give attention to the spectacular things and to ignore the things that do not cause excitement. For example, if a case of smallpox should break out in your community, panic would ensue, and there would be a big rush by the unvaccinated, if there were any, to secure immunity. Yet, there may be many little children in your immediate neighborhood who are wide open to attack by diphtheria. This ought not to be the case.

Turning back to high lights in Public Health history in North Carolina, the State Board of Embalmers, with representatives of the State Board of Health, was established in 1901. In that year, county health work was placed in the hands of county sanitary committees, composed of county commissioners and two physicians, which the commissioners elected to serve with them. That was long before the establishment of our present system of county and city health departments.

One of the high lights, and most important progressive steps in Public Health history in this State, was the establishment by the Legislature, in 1907, of the State Laboratory of Hygiene. However, the laboratory did not begin to function until January 1, 1908, when Dr. Clarence A. Shore became its first director. During the forty years of the laboratory's operations, there have been only two directors—Dr. Shore and Dr. John H. Hamilton, incumbent, who succeeded him. The laboratory performs many services for the people of North Carolina, at a saving to the tax payers of an estimated several million dollars a year. But one of its first and most important services was that which made the Pasteur treatment for rabies available to the people of North Carolina. Prior to that time, it was necessary for those who had been bitten by dogs suspected of being rabid to go to Richmond or some other distant point for treatment. The laboratory now prepares and makes available to the people many other means of protection against preventable diseases.

It was not until 1909 that the Legislature passed a law providing for the

services of a full-time State Health Officer. That same year, legislation was enacted providing for the collection of vital statistics of towns having a population of 1,000 or over. Legislation was also enacted requiring all public water companies to file plans and specifications of their plants with the State Board of Health, and empowering the Board to pass necessary rules and regulations for the care of public water-sheds and plants and to furnish such rules and regulations, and other advice, to those having charge of public water supplies. During that same year, provision was made for counties to provide free diphtheria antitoxin for those unable to pay for it.

In 1913—and this is an important date to remember—the Legislature passed what was then considered to be a statewide model vital statistics law. In 1915, this law was changed so as to conform to the national model, by requiring burial permits in rural communities. However, it was not until 1916 that North Carolina was admitted to the Registration Area for deaths. Under the present law, all births and deaths are required to be registered with the State Board of Health. The value of birth certificates is recognized now more than ever before, because of so many rigid requirements involving them. Except in very rare cases, it is now possible for any citizen of North Carolina to secure a birth certificate.

Public Health, which originally was centered in Raleigh, has now spread throughout the State, through the medium of full-time local health departments, both county and city. In 1911, Guilford was the first county in the United States to inaugurate full-time county health work.

It would be a tedious process to enumerate the order in which the various other counties followed Guilford's lead. In this connection, it is enough to say that, at the present time, 96 of North Carolina's 100 counties are organized for Public Health administration. Only 4 do not have full-time health departments. These are, together with the number of inhabitants

in each, as follows: Madison, 23,461; Jones, 11,377; Pamlico, 10,113; Brunswick, 17,846.

Summed up, this means that of a total population of 3,718,000, there are only 62,797 outside of organized counties. Over against this negligible figure, we find 3,655,203 who do live in counties with full-time health departments.

Since his inauguration on July 1, Dr. J. W. R. Norton, State Health Officer, has repeatedly emphasized the vital importance of local health work, for the administration of which he sincerely hopes to secure sufficient funds from the 1949 Legislature to guarantee in each local unit a program which, at least, will meet minimum requirements for the next biennium.

C A N C E R

By J. W. R. NORTON, M.D.
Secretary and State Health Officer
Raleigh, North Carolina

With one hundred thousand of North Carolina's eight hundred thousand citizens over forty years old sentenced to death by cancer, is it any wonder that this arch enemy of mankind has been made the object of a concentrated attack?

More and more, the attention of doctors and laymen, alike, is being focused on the four degenerative diseases that are responsible for more than half the deaths that occur from all causes, each year. In this small group is cancer. Through countless years cancer has baffled medical science and struck terror to the hearts of men and women of all ages, especially those in middle and late life. We shall not, in this connection, discuss such diseases as heart ailments, apoplexy, or nephritis, which with cancer, comprise group above referred to, but confine ourselves to a recital of what North Carolina already is doing to detect and combat cancer.

To Set the Pattern

In due time, all these deadly human ailments will become the objects of specific attacks by Public Health; but, just now, the guns are being turned on cancer, with a view to making the fight against this great killer a pattern for later attacks on the other degenerative diseases which are taking such a heavy toll of human life, and against which we have made little or no progress.

A comprehensive, concise, preliminary

report of the work, so far, has just been compiled by Doctor Ivan M. Procter, Director of Cancer Control for the North Carolina State Board of Health. We propose at this time to give you a summary of this informative and important memorandum.

On March 1, 1948, the Division of Cancer Control of the North Carolina State Board of Health was activated. Since then, three Cancer Centers have been established and are operating smoothly. A Cancer Center consists of a Detection Clinic with a staff of four Medical Examiners, and a Diagnostic-Management Clinic with a staff of six specialists.

The first Center was established in New Hanover County, at Wilmington, on April 27. The Director is Dr. Donald B. Koonce. The second was opened in Buncombe County at Asheville on June 15, with Dr. E. D. Peasley as Director. The third was opened in Forsyth County, at Winston-Salem, on July 21, with Dr. James F. Marshall as its Director.

Each of the Detection Clinics examines thirty to forty applicants in a two-hour period, one day each week. Any person who is found to have a suspicious lesion is referred to the Diagnostic-Management Clinic, where his case is thoroughly studied by a staff of specialists. These specialists make a complete diagnosis and recommend modern and adequate treatment and

management for the patient. The final diagnosis and recommendations are sent by letter to the patient's personal physician. Approximately 25 per cent of those examined in the Detection Clinic are referred to the Diagnostic Clinic.

Disposition of Patients

No treatment is carried out in the Clinic. All those who are found in need of treatment, whether for cancer or another ailment, are referred back to their family or personal physicians for treatment.

Who is admitted to the Clinics for examinations? This is a pertinent question. The answer is: Any citizen of North Carolina, without regard to race, color, creed or economic circumstances. For the sake of a speedy survey of a relatively large number of citizens most liable to have cancer, only men and women 40 years of age or older are admitted to the Detection Clinics. There are some 800,000 citizens in the State 40 years of age or older. One hundred thousand of these men and women are now doomed to die with cancer. Of course, the deaths will not necessarily take place within any given period, but that does not alter the percentage of deaths which will result from malignancy in North Carolina.

Patients admitted to the Diagnostic Clinic consist of those in whom a so-called "suspicious" lesion or condition is found in the Detection Clinic, or any person, of any age, who has any one of the Seven Danger Signals listed by the American Cancer Society, namely: (1) Any sore that does not heal, particularly about the mouth, tongue, or lips; (2) any painless lump or thickening, especially in the breast or on the lip or tongue; (3) progressive change in color or size of a mole or wart or birthmark; (5) persistent indigestion; (6) persistent hoarseness, unexplained cough, or difficulty in swallowing; (7) any change in normal bowel habits. Cases studied in the Diagnostic Clinic must be referred by a physician—a private practitioner, a Detection Clinic Examiner, a Local Health Officer—or a Welfare Officer.

Who operates the North Carolina Cancer Control Program? The State

Board of Health, by authority of the Cancer Act of 1945. Affiliated agencies are the North Carolina State Medical Society, through its Cancer Committee and the American Cancer Society, through its North Carolina Division. The actual professional services are rendered by private practitioners, members of the Medical Society of the County in which the Cancer Center is located. Funds for operating the Cancer Control Service are derived from appropriations by the Federal Government (U. S. Public Health Service) and, to a lesser degree, by the State Legislature. These are used to defray the actual expenses of operating the Cancer Centers. Also, in 1946, the North Carolina Division of the American Cancer Society donated to the State Board of Health \$25,000 to be used in administering an over-all State Cancer Control Program.

North Carolina has a unique program which is efficient, speedy and economical. The Program differs from that of any other State in the Union, although both the Hillsdale Program in Michigan and the experimental Program in the State of Delaware are similar. North Carolina's is more complete in that it takes both male and female examiners, whereas the others take female only. The North Carolina Program is a five-point plan providing, in Detection Clinics, for examination of the skin, mouth, breast, genitalia and rectum only. These five areas are selected because examining them will reveal 90 per cent of all detectable cancer. They are the ones in which cancer most commonly occurs, is most readily detectable and most frequently curable.

Cancer of the Stomach

Cancer of the stomach is frequent in both men and women. It is difficult to diagnose and carries a high mortality. Every person 40 years of age, who has persistent indigestion should have a competent X-ray study of the stomach. Neither facilities nor qualified personnel are available in sufficient numbers to screen all the citizens who need this service. There is evident among our

people an unfortunate and notable negligence on the part of both men and women, of forty and older, in that they fail to seek thorough and complete examination of the stomach when they have symptoms which may indicate disease of that organ.

The North Carolina Program has now affiliated with it the Tuberculosis Control Program whereby any X-ray of the chest that shows a lesion suspicious of malignancy is reported to the Director of Cancer Control for thorough investigation. This cooperation between two Divisions of the State Board of Health should facilitate finding early cancers of the lung and thereby save more citizens from the ravages of this highly malignant form of the disease. Other departments affiliated with the Cancer Control Program are that of Oral Hygiene (with the cooperation of the Dentists throughout the State), In-

ustrial Hygiene, Local Health Departments and Public Health Nurses.

Preliminary Clinic Results

A survey of the work done by three Centers, operating an average of three and a half months, reveals that 1277 citizens were examined in the three Detection Clinics. More than half (54 per cent) of these revealed disease of one form or another which indicated the advisability of medical attention. Six hundred and eighty-eight were referred to their family physicians for treatment and advice. Three hundred and forty-nine, or approximately one out of every 4 Detection Center examinees, were referred to the Diagnostic Clinic for complete examination. Seventy-six of this number were found to have cancer. That represents more than 6 per cent of the total number examined, and twelve times the average found in Detection Clinics throughout the Nation.

WELL BALANCED DIET BEST SOURCE OF B COMPLEX

Balanced meals are more likely to supply satisfactory amounts of the B complex vitamins than are vitamin pills and a haphazard diet, according to C. A. Elvehjem, Sc.D., Dean of the Graduate School and Professor of Biochemistry at the School of Agriculture of the University of Wisconsin, Madison.

Although vitamin B concentrates have been extremely valuable in enabling physicians to treat specific deficiencies and manufacturers to fortify certain products, common foods still remain the best source of the vitamins in practical nutrition, says Dr. Elvehjem.

The statement is contained in a report of the Council on Foods and Nutrition of the American Medical Association appearing in the current (Nov. 27) issue of *The Journal of the American Medical Association*.

Since the daily requirement of some of the vitamins by the human body is not known, since information about some of their functions in the body is lacking and since the amount of the

vitamins varies per unit of product in concentrates, the difficulty of trying to replace foods with vitamin capsules is apparent.

Some modern methods of processing foods are obstacles to selecting a diet balanced in the B complex vitamins, Dr. Elvehjem indicates.

The B complex consists of at least 12 vitamins required by the body in small amounts and of several other substances about which little is known, he says.

Named vitamins in the complex are thiamine, riboflavin, niacin, pyridoxine, pantothenic acid, choline, biotin, inositol, para-aminobenzoic acid, folic acid, vitamin B10 and vitamin B11, and vitamin B12.

Dr. Elvehjem lists vitamins B10 and B11 together because certain relationships of these vitamins have not been determined.

Deficiency of thiamine may cause nervous and heart diseases and anemia. People deprived of the vitamin become depressed, irritable and fearful.

